DRAFT

2000-2002 STATE OF NEW MEXICO §303(d) LIST FOR ASSESSED RIVER/STREAM REACHES REQUIRING TOTAL MAXIMUM DAILY LOADS (TMDLs)

RECORD OF DECISION (ROD) FOR RIVER/STREAM LISTINGS

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Surface Water Quality Bureau
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DECEMBER 2000

Note: The following watersheds and/or waterbodies were studied during this biennial listing cycle:

Cimarron, Jemez, Upper Chama, Lower Chama, San Francisco, Red River, Mora River, Santa Fe River, Middle Rio Grande

All other listings, with few individual exceptions, remain unchanged from the 1998-2000 listings.

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RIO GRANDE BASIN

UPPER RIO GRANDE

1. Rio Grande from Rio Pueblo de Taos to the NM-CO border - (WBS URG1-20000, WQS 2119)

Listed for turbidity, stream bottom deposits and temperature. Only 1/37 (3%) samples collected from four stations in this reach exceeded the temperature criteria. Turbidity was 1/8(13%) at each of the four stations on this reach.

1998 ACTION: Temperature will be upgraded to Full Support. Turbidity will be listed on the 305(b) report as Full Support, Impacts Observed. The reach will continue to be listed on the 303(d) list as Partial Support for Stream Bottom Deposits.

2000 ACTION: None

2. Rio Grande from Guaje Canyon to the confluence with the Rio Pueblo de Taos - (WBS URG1-10000, WQS 2111)

Listed for metals (Hg and Al), turbidity, temperature, stream bottom deposits and pH. For pH, there is an extensive data set. The cumulative ratio of 7 stations is 7/137. No single stations have ratios below full support. pH will be removed from the list. For temperature, the cumulative ratio of exceedences to samples at 12 stations is 2/100. Temperature should be removed from the list. Five stations contain information on aluminum. Three stations URG111.021035,URG111.021025, and URG110.003115 are Full Support, Impacts Observed. Turbidity is not supported at stations URG111.004407, URG111.003903, URG111.021035, URG111.021025, URG111.004410 and URG111.003115.

There is a ratio of 2/9 exceedences of mercury greater than detection in data prior to 1989 at USGS station 08276500. The greatest value was 0.2 ug/l. Twelve samples reported for total mercury at this site since 1990 have been less than detection (0.1 ug/l). NMED has collected twenty-five samples in this segment in the last 10 years. All have been reported back as less than detection (0.1 ug/l). The ROD should be modified to show the cumulative ratio of exceedences for mercury is 2/41 in the last 10 years and *0/31 within the last 5 years*.

Over the last five years the ratios for chronic aluminum at three NMED stations are 1/3, 1/3, and 1/3. Ratios for the two USGS stations are 1/14 and 0/4 for the last five years. USGS samples were collected quarterly and NMED samples were grab samples from various dates. We believe that this is adequate data to support a change in the listing.

1998 ACTION: As per the assessment protocol, one exceedence of the chronic screening level, aluminum will be listed on the 305(b) list as Full Support, Impacts Observed. The reach will continue to be listed on the 303(d) list as Partial Support for Stream Bottom Deposits.

2000 ACTION: None

3. Pojoaque River from mouth on Rio Grande to Nambe Dam - (WBS URG1-10200, WQS, 2111)

Listed for turbidity, stream bottom deposits and nutrients. There is limited 5-10 year data, 0/6 samples at 2 stations from 1987 are greater than the 50 NTU standard. In the Best Professional Judgement of the Surveillance and Nonpoint staff this stream reach is not impacted by nutrients. There have been no documented cases of algal growth. There are no numeric stream standards for nutrients for this stream classification. This reach is impacted by stream bottom deposits and extreme low flow events.

1998 ACTION: This reach will upgraded to Full Support for turbidity and nutrients. The reach will continue to be listed on the 303(d) list as Partially Supported for Stream Bottom Deposits.

2000 ACTION: None

4. Rio Tesuque from southern border of Tesuque Pueblo to confluence of Tesuque Creek and Little Tesuque Creek - (WBS URG1-10210, WQS 2111)

Previously listed for turbidity, temperature, dissolved oxygen and fecal coliform. There is only one sample station on this segment, URG111.003305. All data are from a 1994 survey. For turbidity, 0/9 samples exceeded the criteria. For temperature, 1/9 (11%) exceeded the criteria. For dissolved oxygen, 0/9 samples exceeded the criteria. For fecal coliform, 0/3 samples exceeded the criteria.

1998 ACTION: Turbidity, dissolved oxygen, and fecal coliform will be upgraded to Full Support and removed as causes of non-support. The reach will be listed as Full Support, Impacts Observed on the 1998 305(b) list for temperature.

2000 ACTION: None

5. Tesuque Creek from the confluence of Little Tesuque Creek to the confluence of North and South Forks of Tesuque Creek- (WBS URG1-10220, WQS 2118)

This reach was not listed on the 1996 list. Station URG118.003405 is not supported, 3/9 (33%) for turbidity. Station URG118.003441 is full support.

1998 ACTION: The reach will be listed on the 1998 303(d) list as Not Supporting for turbidity. **Rename this reach from *Tesuque Creek at its confluence with Little Tesuque Creek* to the above reach**

2000 ACTION: None

6. North Fork of Tesuque Creek from the confluence with the South Fork to the headwaters - (WBS URG1-20221, WQS 2118)

Not on 1996 303(d) list. At two stations from a 1994 survey ratios for total phosphorous were 1/4 and 3/15 (20%). In this survey biological assessments were also conducted. The North Tesuque Creek site was selected as the survey reference site because of its high quality habitat and in-stream characteristics. In this case the biological assessment will override the physical/chemical data.

1998 ACTION: The reach will be added to the 305(b) list as Full Support, Impacts Observed for total phosphorus.

2000 ACTION: None

7. South Fork of Tesuque Creek from confluence with the North Fork to the headwaters- (WBS URG1-10222, WQS 2118)

Listed for metals (Al) and total phosphorus. The ratio of total phosphorus samples greater than the criteria is 1/10 (10%) for 5-10 year data. 1/3 samples collected in the last five years exceeded the chronic screening criteria for dissolved aluminum. In this reach 1/3 samples collected at various times in 1994 exceeded he chronic screening level for aluminum. A biological assessment was conducted on this reach in 1994. The assessment found the station to be 100% of the reference condition.

1998 ACTION: This reach will be listed on the 1998 305(b) list as Full Support, Impacts Observed for total phosphorous and dissolved aluminum.

2000 ACTION: None

8. Little Tesuque Creek from the confluence of Big Tesuque Creek to the headwaters- (WBS URG1-10230, WQS 2118)

Listed for turbidity and metals (Al and Cd). Criteria violations for turbidity are documented at all stations. The listing for Cd is not supported. 1/10 (10%) samples on the reach for dissolved cadmium was reported as greater than the chronic screening criteria. One exceedence within 5 years is permitted. This sample did not meet quality control requirements because the dissolved portion exceeded the reported total Cd concentration. Acute exceedences of aluminum were observed at stations URG118.003407, URG118.003414, and URG118.003417.

1998 ACTION: The reach is listed on the 1998 303(d) list as Not Supported with aluminum and turbidity as causes of non-support. Cadmium will be removed as a cause of non-support for this reach.

2000 ACTION: None

9. Rio Frijoles from confluence with Rio Medio to Pecos Wilderness boundary (WBS URG1-10700, WQS 2112)

Previously listed for total phosphorus, reduction of riparian vegetation and streambank destabilization. All data are from a 1988 survey. For total phosphorus, the exceedence ratio was 1/5, full support, impacts observed.

1998 ACTION: This reach is full support, impacts observed for total phosphorus and will be reflected in the 305(b) report. This reach will continue to be listed as Partially Supported for unknown cause on the 1998 303(d) list.

2000 ACTION: None

10. Rio Chupadero - a tributary to the Pojoaque River upper perennial portions to the headwaters - (WBS URG1-10240, WQS 2118)

Listed for metals (Al, Ni), turbidity, stream bottom deposits and total phosphorus. For turbidity for the last five years the ratio of exceedences is 0/5 for the ten year period the ratios are 7/27 (26%). All turbidity exceedences are from spring sampling during runoff conditions. Turbidity values are not excessive, the greatest is 30 NTU. Station Chupadero Upper has 1/4 exceedences of the acute criteria for aluminum. Other stations are full support for dissolved aluminum. In 1988 1/1 sample was greater than the chronic criteria for dissolved nickel. Additional samples for dissolved nickel at these stations (0/4) from 1991-93 were all below the criteria. The cumulative ratio of all nickel samples for the reach is 1/13 in the last ten years. Total phosphorus data is available for the ten year period. Ratios for the three stations are 1/17 and 4/19 at the upper and lower Chupadero stations respectively for 5-10 year data and 0/1 within the last five years at the same stations. An additional station within 5 years has a ratio of 1/4.

1998 ACTION: The reach is listed as Not Supported on the 1998 303(d) list with turbidity, Al and stream bottom deposits as the cause of non-support. Nickel will be removed as a cause of non-support based on the most recent data. The reach will be listed as Full Support, Impacts Observed on the 1998 305(b) report with total phosphorus as the cause.

2000 ACTION: None

11. Rio en Medio from mouth on Pojoaque River to Aspen Ranch - (WBS URG1-10250, WQS 2118)

Listed for metals (Al, Cd), turbidity, and total phosphorus. Cadmium was sampled at three stations on this reach. Ratios within the last 5 years are 0/1, 0/3, and 0/3. Ratios for five-ten year data are 0/6, 1/3, and 0/4 at the same stations. Similarly for aluminum data ratios are 1/4, 2/3, and 3/5 in the 5-10 time frame and 0/3, 0/3, and 0/1 within the last five years. For turbidity data from the same stations, ratios are 3/12, 0/13 and 3/11 in the 5-10 year period and 0/4, 0/3, and 0/1 for the last 5 years. For total phosphorus, 3/16 samples exceeded the criteria at station HRG80 with two other stations having 2/15 and 0/20 ratios within 5-10 years and 0/5 and 0/1 in the last 5 years. A biological assessment was conducted on this reach in 1994. The biological assessment found this station to be Fully Supporting (84%). The HBI for this station was 2.21which is rated as excellent for organic pollution.

1998 ACTION: Cadmium and aluminum will be removed as causes of non-support. The reach is Full Support, Impacts Observed for turbidity and total phosphorus. The biological data is sufficient to classify the reach as Full Support.

2000 ACTION: None

12. Capulin Creek from mouth on Rio Grande to headwaters (WBS URG1-10600, WQS 2118)

Previously listed for stream bottom deposits and turbidity. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits and turbidity as the cause of non-support.

2000 ACTION: None

13. Rio Chamita from mouth on Rio Chama to New Mexico-Colorado border (WQS 2116, WBS URG2-30500)

Listed for temperature, turbidity, total phosphorus, total ammonia, chlorine, fecal coliform and stream bottom deposits. There are five stations on this reach with data within the last 12 years: URG116.020005, URG116.020015, URG116.020035, URG116.020045 and URG116.020055. Ratios for temperature at these stations are 5/13, 3/12, 2/10, 1/1, and 1/4 respectively. Ratios for turbidity are 0/5, 0/5, 0/5, 0/1, and 3/3 respectively. Ratios for total phosphorus are 14/14, 5/14, 1/11, 1/3, and 1/1. Ratios for total ammonia are 11/11, 3/11, 5/10, 0/3, and 0/1 respectively. Chlorine data is available at stations 0005, 0015 and 0035, 1/1, 1/1, and 1/1 for the 5-10 year period. Ratios are 0/1 and 0/1 for the last 5 years. The Chama WWTP has begun dechlorination prior to discharge. Fecal coliform data is also available only from these three stations. Ten year ratios are 0/2, 0/2, and 2/2 for these stations.

1998 ACTION: Station 0005 will be listed as Not Supported with temperature as the cause. Turbidity data indicate that the fishery use is not supported at station URG116.020055 and full support at stations URG116.020005, URG116.020015, and URG116.020035. Total phosphorus data indicate the fishery use is not supported at stations URG116.020005 and URG116.020015, Full Support, Impacts Observed for station URG116.020055, and full support at station URG116.020035. Total ammonia data indicate that the fishery use is not supported at stations URG116.020005, URG116.020015 and URG116.020035, while it is full support at station URG116.020055. Fecal coliform data indicate full support of the contact recreation use at stations URG116.020005 and URG116.020015 and will be listed as Full Support, Impacts Observed at station URG116.020035 on the 1998 305(b) list. The reach will continue to be listed on the 303(d) list as Partial Support for Stream Bottom Deposits.

2000 ACTION

Temperature: Thermographs on this reach were deployed from July 20 through October 1, 1998. HQCWF temperature criteria were exceeded at all three thermograph sites. The upper site exceedence ratio was 71/1,752. This site exceeded the draft Temperature Protocol for hours of exceedence duration > 4hours, but no more than six hours in a 24-hour cycle, and for no more than three consecutive days at 20°C. The middle site 173/1,751 with a one-time maximum temperature exceedence of 23.5°C and the lower site 254/1,750 with a one-time maximum temperature exceedence of 24.5°C.

A TMDL was developed for the Rio Chamita to address temperature.

Turbidity: Turbidity samples at all three stations on this reach were 0/9, 1/9 and 0/9 respectively. There is not impairment by turbidity on this reach.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for turbidity on the Rio Chamita.

Stream Bottom Deposits: Two stations were evaluated along this reach. The station above the WWTP in Chama has 16% fines <2mm. The station below Sexto Creek had 24% fines <2mm. Each of these stations would be considered as having supportive bottom substrate.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for stream bottom deposits on the Rio Chamita.

Total Phosphorus: There were four stations on this reach. The uppermost station above Sexto Creek was 4/4 for TP but data is not representative due to no flow coming from the Colorado side of the border. The middle two stations were both 0/4 and the station below the WWTP was 6/6 for TP. Nonpoint source impacts are considered minimal but a load allocation of 1.1 lbs./day in the upper watershed has been calculated due to the documented exceedences.

The TMDL was developed for the reach below the WWTP to the confluence with the Rio Chama on the Rio Chamita to address total phosphorus.

Total Ammonia: There were four stations on this reach. The stations above the WWTP were 0/7, 0/8 and 0/8. The station below the WWTP was 4/8 for total ammonia. Exceedences were of the 4-day chronic criteria during Fall low flow conditions. No acute exceedences were documented.

A TMDL was developed for the reach below the WWTP on the Rio Chamita to address total ammonia.

Fecal Coliform: Two fecal coliform samples from this reach below the WWTP were both above the criterion. Fecal coliform will be added and listed as not supporting the designated use on this reach. The Village of Chama has fecal coliform limits in their current NPDES permit.

A TMDL was developed for the reach below the WWTP on the Rio Chamita to address fecal coliform.

Chlorine: Because of significant interference under ambient conditions, no in-stream chlorine measures were collected. The Village of Chama has dechlorination requirements in their current NPDES permit with a daily monitoring provision. A review of the submitted Discharge Monitoring Report (DMR) data shows full compliance at this time.

Pursuant to 40 CFR 130.7(b)(1)(ii), a TMDL is not required if other pollution control requirements required by State or federal authority are stringent enough to implement the appropriate water quality standards for such waters. The Village of Chama has dechlorination requirements in their current NPDES permit with a daily monitoring provision. A review of the submitted Discharge Monitoring Report (DMR) data shows full compliance at this time.

Metals (Al chronic): Samples at the station just above and below the WWTP exceeded the 4-day chronic values for aluminum during spring sampling. The 4-day average for the upstream station was 93 ug/l and below the WWTP the 4-day average was 145ug/l of dissolved aluminum. The chronic criterion is 87ug/l. Aluminum was not detected in samples collected during the summer and fall seasons. The measured value for the upstream station is within sampling and analytical error range (+/- 23 with maximum exceedence value being 110ug/l).

A new listing will be added for metals (Al chronic) below the WWTP

Total Organic Carbon (TOC): TOC greater than the criterion (7mg.l) was found in 4/8 samples from the station above Sexto Creek (large wetland). During the summer and fall months, irrigation withdrawals in Colorado are such that there is no flow in this reach. The area becomes a stagnant pool and decaying detritus causes the TOC to increase. The impact to the fishery is from flow regulation and natural biological functions.

14. Rito de Tierra Amarilla at US Highway 84 Bridge (WQS 2116, WBS URG2-30100)

New listing based on 1988 data at station URG116.017020. The total phosphorus ratio at this station is 2/2.

1998 ACTION: This reach is listed as Not Supported with total phosphorus as the cause of non-support.

2000 ACTION: This river has been divided into upper and lower segments.

Upper Rito de Tierra Amarilla at US Highway 84 Bridge (Rio Grande, 2116), E, Not Supported, (URG2-30100)

Two sample stations were established on this reach. The upper station at the Hwy 84 bridge was 0/4 for Total phosphorus exceedences. The lower station at the Hwy 112 culvert was 0/4 for total phosphorus exceedences.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for total phosphorus on the Upper Rito de Tierra Amarilla.

15. Lower Rito de Tierra Amarilla at US Highway 112 culvert, (WQS 2116 WBS URG2-30100)

NEW LISTING

2000 ACTION:

Stream Bottom Deposits: From the point that the road intercepts the stream, the stream is 100% embedded with silt runoff from land activities associated with the upper drainage area.

A new listing will be added for stream bottom deposits at the lower sampling station

Turbidity: Two sample stations were established on this reach.

The upper station at the Hwy 84 bridge was 0/8 for turbidity exceedences. The lower station at the Hwy 112 culvert was 4/8 exceedences for turbidity.

A new listing will be added for turbidity at the lower sampling station

Temperature: One thermograph were deployed on the lower reach The thermograph was deployed on the Lower Rito de Tierra Amarilla at the Hwy 112 bridge and exceeded the HQCWF criterion 194/864 times with a maximum temperature of 29.5°C.

A new listing will be added for temperature at the lower sampling station

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16. Nabor Creek from mouth of Rio Chamita to Nabor Reservoir (WQS 2116, WBS URG2-30510)

Previously listed for total phosphorus and total ammonia. One station is on the reach (URG116.020040). Total phosphorus data indicate Full Support, Impacts Observed for the fishery use (1/4). Total ammonia data indicate full support for the fishery use (0/4).

1998 ACTION: Total ammonia will be removed as a cause of non-support for this reach. Total phosphorus will be upgraded to Full Support, Impacts Observed and will be listed on the 1998 305(b) report.

2000 ACTION:

Total Phosphorus: There is no longer a standard associated with total phosphorus. The Nutrient Assessment Protocol will be used to assess nutrient loading on this reach.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for all parameters on Nabor Creek.

17. Rio Chama from mouth of Rio Brazos to Little Willow Creek (WQS 2116, WBS URG2-30000)

Previously listed for total phosphorus, total ammonia, turbidity, chlorine and stream bottom deposits. Data ratios for total phosphorus are 0/10 from a 1988 survey. No more current data is available. Data ratios for total ammonia are 0/10 from the same survey. Data ratios for turbidity are also 0/10 from the same survey. Total residual chlorine data from 1986 was 1/1 at stations URG116.019550 and URG116.020505. There are no sources of chlorine on this segment although it would receive impacts from the Rio Chamita which did have chlorine impacts from this time period.

The Chama WWTP has however begun dechlorination since this time and no exceedences have been reported within the last 5 years.

1998 ACTION: The total phosphorus, total ammonia and turbidity will be removed as causes of non-support for this reach. As per the assessment protocol the reach will be listed as Full Support- Impacts Observed on the 1998 305(b) list with chlorine as a cause. The reach will continue to be listed on the 303(d) list as Partial Support for Stream Bottom Deposits.

2000 ACTION:

Stream Bottom Deposits: This reach is characterized by one station below the Village of Chama. The % fines <2mm was measured at <1%. This reach is assessed as having a fully supporting substrate. An additional station just outside of this reach had a % fines <2mm at 5%.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for stream bottom deposits on the Rio Chama.

Metals (Al Chronic): A 4-day average of 113ug/l was observed during spring. No detectable aluminum was seen during summer and fall sampling. The value is within the error range for aluminum analyses. This will not be listed as not supporting but will be listed as Full Support, Impacts observed in the 305(b) Report.

Add to the 305(b) report as FSIO.

Temperature: Two thermographs were deployed on this reach. The upper thermograph was deployed under the HWY 17 bridge and did not exceed the HQCWF criterion. The lower thermograph was deployed at the Rio Chama and Hwy 84 fishing access and exceeded the HQCWF criterion 363/1,704 times with a maximum temperature of 26°C.

Temperature will be added as a cause of non-support for the lower section (Highway 84 fishing access) of the Rio Chama

18. Chavez Creek from the confluence with the Rio Brazos to the headwaters (WQS, 2116)

NEW LISTING

2000 ACTION:

Temperature: One thermograph was deployed on this reach The thermograph was deployed on Chavez Creek at the Hwy 512 bridge and exceeded the HQCWF criterion 160/864 times with a maximum temperature of 26°C.

Temperature will be added as a cause of non-support for this reach of Chavez Creek

Stream Bottom Deposits: Non-permitted stream modifications were carried out on this reach of Chavez Creek and stream bottom deposits have been documented. This reach will be listed in the 305(b) Report as Full Support, Impacts Observed until more data can be collected.

Add to the 305(b) report as FSIO.

Turbidity: Non-permitted stream modifications were carried out on this reach of Chavez Creek. This reach will be listed in the 305(b) Report as Full Support, Impacts Observed until more data can be collected. The exceedence ratio was 1/8.

Add to the 305(b) report as FSIO.

Total Phosphorus: Non-permitted stream modifications were carried out on this reach of Chavez Creek. This reach will be listed in the 305(b) Report as Full Support, Impacts Observed until more data can be collected. The exceedence ratio was 1/3.

There is no longer a standard associated with total phosphorus. The Nutrient Assessment Protocol will be used to assess nutrient loading on this reach.

19. Rio Brazos from mouth on Rio Chama to Chavez Creek (WQS 2116, WBS URG2-30200)

Previously listed for temperature, turbidity, chlorine, nutrients and stream bottom deposits. One sampling station is on the reach (URG116.008005). Data for temperature and turbidity are 0/2.

Total residual chlorine data is 1/1 exceedences from 1986 data however there are no known sources of chlorine on this reach. A review of data related to the nutrients listing show that total phosphorus values at this station are well below the criteria of 0.1 mg/l and nitrate levels are also low with levels reported as less than 0.04 mg/l. No specific reason for the previous listing can be found.

1998 ACTION: Temperature, turbidity, chlorine, and nutrients will be removed as causes of non-support for this reach. Chlorine will be listed as Full Support, Impacts Observed on the 1998 305(b) list. The reach will continue to be listed on the 303(d) list as Partial Support for Stream Bottom Deposits.

2000 ACTION:

Temperature: Two thermographs were deployed on this reach. The upper thermograph was deployed above Corkins Lodge and did not exceed the HQCWF criterion. The lower thermograph was deployed at the Rio Brazos and Hwy 84 bridge and exceeded the HQCWF criterion 463/1,752 times with a maximum temperature of 27°C.

Temperature will be added as a cause of non-support for the lower section (Rio Brazos at Highway 84 bridge) of the Rio Brazos

Stream Bottom Deposits: This reach has been highly modified by highway construction. The natural substrate has been replaced with rounded stones of an almost homogenous size. Although this substrate has been highly modified, it does not have signs of heavy sediment load.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for stream bottom deposits on the lower Rio Brazos.

20. Rio Chama from the mouth on the Rio Grande to Abiquiu Dam (WQS 2113, WBS URG2-10000)

Previously listed for turbidity, pH, dissolved oxygen, unionized ammonia, nutrients and stream bottom deposits. There are no numeric turbidity criteria for this reach. pH data is available at two stations in the 0-5 year interval ratios at these stations are 0/70 and 0/9. Data in the 5-10 year interval is available from six stations with ratios of 0/20, 0/6, 2/6, 2/6, 2/8, and 0/7. Data for dissolved oxygen from two stations within the last 5 years has a cumulative ratio of 0/79. Data from 5-10 years has a cumulative ratio of 0/50. Total ammonia data is available from one station in the last five years with a ratio of 0/9. Five stations have data for total ammonia in the 5-10 year time frame.

The ratios at these stations are 0/6, 1/6, 0/7, 0/8, and 0/7. In the only station with a criteria exceedence, a three day average was calculated. This 3-day average did not exceed the chronic criteria. During the data review for this reach it was noted that there had been 1/10 (10%) acute exceedence of the dissolved aluminum criteria.

1998 ACTION: Turbidity, dissolved oxygen, and unionized ammonia have been removed as causes of non-support. This reach will be listed as Full Support, Impacts Observed for aluminum on the 1998 305(b) list. No data either to support listing or de-listing can be found for nutrients. There is no numeric turbidity criteria for this reach therefore turbidity will be removed. pH data is available at two stations in the 0-5 year interval ratios at these stations are 0/70 and 0/9. Data in the 5-10 year interval is available from six stations with ratios of 0/20, 0/6, 2/6, 2/6, 2/8, and 0/7. This reach is Partially Supporting for pH. Data for dissolved oxygen from two stations within the last 5 years has a cumulative ratio of 0/79. Data from 5-10 years has a cumulative ratio of 0/50. This reach is fully supporting for dissolved oxygen. Total ammonia data is available from one station in the last five years with a ratio of 0/9. Five stations have data for total ammonia in the 5-10 year time frame. The ratios at these stations are 0/6, 1/6, 0/7, 0/8, and 0/7. In the only station with a criteria exceedence, a three day average was calculated. This 3-day average did not exceed the chronic criteria. This reach is Full Support for total ammonia. During the review for this reach it was found that there had been 1/10 (10%) acute exceedence of the dissolved aluminum criteria. This reach will be listed as Full Support, Impacts Observed for aluminum on the 1998 305(b) list. No data either to support listing or de-listing can be found for nutrients. The reach will continue to be listed on the 303(d) list as Partial Support for nutrients and pH.

2000 ACTION:

Plant Nutrients: There were no exceedences of the plant nutrient criteria on this reach.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for plant nutrients on this reach of the Rio Chama.

pH: This reach is characterized by three stations. Exceedence ratios are as follows: spring 0/12, summer 1/6 and fall 0/6. The cumulative exceedence ratio is 1/24. This reach is fully supporting.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for pH on this reach of the Rio Chama.

DO: This reach is characterized by three stations. The exceedence ratios on this reach are as follows: spring 0/12, summer 1/6 and fall 2/6. The cumulative exceedence ratio on this reach is 3/24. The standard is 6.0mg/l. This reach is full support, impacts observed.

Add to the 305(b) report as FSIO

Metals (Al chronic): For the summer run, the 4-day average was 410ug/l of dissolved aluminum. The chronic criterion is 87ug/l.

Metals (al chronic) will be added as a cause of non-support for this reach of the Rio Chama

Unknown: No unknown constituents were detected in this survey.

Unknown will be removed as a cause of non-support

21. Rio Ojo Caliente from the mouth on the Rio Chama to the confluence of the Rio Vallecitos and Rio Tusas (WQS 2113, WBS URG2-10100)

Previously listed for turbidity and stream bottom deposits. There are no numeric turbidity criteria for this warmwater fishery.

1998 ACTION: Turbidity will be removed as a cause of non-support. The reach will continue to be listed on the 303(d) list as Partial Support for Stream Bottom Deposits.

2000 ACTION:

Stream Bottom Deposits: One station was evaluated along this reach. The reach had 42% fines <2mm (NS) and an embeddedness of 54%(NS). According to the Assessment Protocol, this reach is considered not supporting its designated use.

STREAM BOTTOM DEPOSITS WILL BE RETAINED AS A CAUSE OF NON-SUPPORT FOR THIS REACH

Temperature: The exceedence ratio for this reach is as follows: spring 0/4, summer 1/2 and fall 0/2. The cumulative exceedence ratio for this reach is 1/8. The standard is 31°C.

Add to the 305(b) report as FSIO.

pH: The exceedence ratio for this reach is as follows: spring 1/4, summer 0/2 and fall 0/2. The cumulative exceedence ratio for this reach is 1/8. The standard is 6.6 to 8.8. The one exceedence was 9.65. This reach is full support, impacts observed.

Add to the 305(b) report as FSIO.

Metals (Al chronic): For the spring run, the 4-day average was 362.5ug/l of dissolved aluminum. The chronic criterion is 87ug/l.

Metals (al chronic) will be added as a cause of non-support for this reach

22. Canjilon Creek from inflow to Abiquiu Reservoir to Canjilon Lakes outfall (WQS 2116, URG2-10900)

Previously listed for metals (aluminum), conductivity, turbidity, total phosphorus and stream bottom deposits. All data are from sampling at four stations in 1990. (Stations URG116.010505, 515, 520, 525, 530, and 535). Ratios for aluminum are 0/1, 0/1, 0/0, 0/2, 0/2 and 0/0. Ratios for conductivity are 3/3, 1/3, 0/2, 0/4, 0/4, 0/3 respectively. Ratios for turbidity are 2/3, 0/3, 0/2, 0/4, 0/4, and 0/3. Ratios for total phosphorus are 2/3, 0/3, 0/2, 0/4, 1/3, and 1/3.

1998 ACTION: Aluminum will be removed as a cause of non-support for this reach. Conductivity, turbidity and total phosphorus will be retained as a cause of non-support at the two lower stations. The reach will continue to be listed on the 303(d) list as Not Supporting for Stream Bottom Deposits.

2000 ACTION:

Conductivity: This reach is characterized by two stations. The exceedence ratios are as follows: spring 4/8, summer 4/4 and fall 4/4. The cumulative exceedence ratio for this reach is 12/16. The standard is 500umhos. This reach is not supporting.

Conductivity will remain as a cause of non-support for this reach

Turbidity: This reach is characterized by two stations. The exceedence ratio is as follows: spring 4/8, summer 2/4 and fall 0/4. The cumulative exceedence ratio for this reach is 6/16. The standard is 25NTU. This reach is not supported.

Turbidity will remain as a cause of non-support for this reach

Stream Bottom Deposits: One station was evaluated along this reach. The reach had 21% fines <2mm (FS). According to the Assessment Protocol, this reach is considered fully supporting its designated use.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for stream bottom deposits on Canjilon Creek.

Temperature: This reach is characterized by two stations. Two thermographs were deployed and lost on this reach. The exceedence ratio for this reach is as follows: spring 0/8, summer 4/4 and fall 0/4. The cumulative exceedence ratio for this reach is 4/16. This reach is partially supported.

Temperature will be added to this reach as a cause of non-support

DO: This reach is characterized by two stations. The exceedence ratio for this reach is as follows: spring 0/8, summer 2/4 and fall 0/4. The cumulative exceedence ratio for this reach is 2/16. This reach is partially supported. The standard is 6.0mg/l.

Do will be added to this reach as a cause of non-support

Total Organic Carbon (TOC): This reach is characterized by two stations. The exceedence ratio is as follows: spring 1/8, summer 3/4 and fall 3/3. The cumulative exceedence ratio for this reach is 7/15. The standard is 7mg/L. This reach is not supported.

TOC will be added to this reach as a cause of non-support

Total Phosphorus: Total phosphorus no longer has a standard associated with it. The Nutrient Assessment Protocol will be used to assess nutrient loading on this reach.

23. Rio Nutrias from the confluence with the Rio Chama to the headwaters (WQS 2116)

2000 ACTION:

Turbidity: The exceedence ratio for this reach is as follows: spring 1/4, summer 1/2 and fall 1/2. The cumulative exceedence ratio for this reach is 3/8. The standard is 25 NTU. This reach is not supported.

Turbidity will be added to this reach as a cause of non-support

Temperature: The exceedence ratio for this reach is as follows: spring 0/4, summer 1/2 and fall 0/2. The cumulative exceedence ratio on this reach is 1/8. The standard is 20°C. The reach is full support, impacts observed.

Add to the 305(b) report as FSIO.

24. Rio Cebolla from the confluence with the Rio Chama to the headwaters (WQS 2116)

2000 ACTION:

Conductivity: The exceedence ratio on this reach is as follows: spring 0/1, summer 1/1 and fall 1/1. The cumulative exceedence ratio on this reach is 2/3. The standard is 500 umhos. This reach is not supporting.

Conductivity will be added to this reach as a cause of non-support.

Temperature: The exceedence ratio for this reach is as follows: spring 0/4, summer 1/2 and fall 0/2. The cumulative exceedence ratio on this reach is 1/8. The standard is 20°C. This reach is full support, impacts observed.

Add to the 305(b) report as FSIO.

25. Rio del Oso from mouth on Rio Chama to headwaters (WBS URG2-10400, WQS 2112)

Previously listed for stream bottom deposits, turbidity, reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits and turbidity as the cause of non-support.

2000 ACTION:

Turbidity: The exceedence ratio for this reach is as follows: spring 1/4, summer 2/2 and fall 0/2. The cumulative

exceedence ratio on this reach is 3/8. The standard is 10NTU. This reach is not supported.

Turbidity will be retained as a cause of non-support

Stream Bottom Deposits: One station was evaluated along this reach. The reach had 95% fines <2mm (NS). According to the Assessment Protocol, this reach is considered not supporting its designated use.

Stream bottom deposits will be retained as a cause of non-support for this reach

Temperature: The exceedence ratio on this reach is as follows: spring 0/4, summer 2/2 and fall 0/2. The cumulative exceedence ratio on this reach is 2/8. This reach is partially supporting.

Temperature will be added to this reach as a cause of non-support

Total Organic Carbon (TOC): The exceedence ratios are as follows: spring 0/4, summer 0/2 and fall 2/2. The cumulative exceedence ratio for this reach is 2/8. This reach is partially supporting.

Toc will be added as a cause of non-support

DO: The exceedence ratio for this reach is as follows: spring 0/4, summer 1/2 and fall 0/2. The cumulative exceedence ratio for this reach is 1/8. The standard is 6.0mg/l. This reach is full support, impacts observed.

Add to the 305(b) report as FSIO.

26. Abiquiu Creek from mouth on Rio Chama to headwaters (WQS 2113, WBS URG2-10700)

New listing for stream bottom deposits and plant nutrients. We were unable to find documentation to support these listings.

1998 ACTION: The reach will continue to be listed on the 303(d) list as Partial Support for Stream Bottom Deposits and plant nutrients.

2000 ACTION:

Stream Bottom Deposits: One station was evaluated along this reach. The reach had 87% fines <2mm (NS). According to the Assessment Protocol, this reach is considered not supporting its designated use.

Stream bottom deposits will be retained as a cause of non-support for this reach

Plant Nutrients: Plant nutrients will remain listed as a cause of non-support.

Plant nutrients will be retained as a cause of non-support

DO: The exceedence ratio for this reach was as follows: spring 0/4, summer 2/2 and fall 0/2. The cumulative exceedence ratio is 2/8 on this reach. The standard is 6.0mg/l. This reach is partially supporting.

DO will be added to this reach as a cause of non-support

Fecal Coliform: The exceedence ratio for this reach is as follows: spring 1/1, summer 0/1 and fall 0/1. The cumulative exceedence ratio on this reach is 1/3. The standard is 2000/100 ml. This reach is full support, impacts observed.

Add to the 305(b) report as FSIO.

27. El Rito Creek perennial reaches above El Rito (WQS 2112, WBS URG2-10600)

Previously listed for turbidity, stream bottom deposits and nutrients. Turbidity data from a 1990 survey is the only available data. Ratios for turbidity were 1/1, 1/1, and 0/1. No specific data is available for the causes stream bottom deposits and nutrients.

1998 ACTION: Turbidity will be listed as Full Support, Impacts Observed on the 1998 305(b) list. The reach will continue to be listed on the 303(d) list as Partial Support for Stream Bottom Deposits and plant nutrients.

2000 ACTION:

Plant Nutrients: Plant nutrients will remain listed as a cause of non-support.

Plant nutrients will be retained as a cause of non-support

Turbidity: Field data show an exceedence ratio of 2/8 for turbidity on this reach. The standard is 10NTU.

Turbidity will be added to this reach as a cause of non-support

Stream Bottom Deposits: Two stations were used to evaluate this reach. The upper station, near the headwaters, had 18% fines <2mm (FS). The lower station, above the Town of El Rito, had 7% fines <2mm (FS). According to the Assessment Protocol, this reach is considered fully supporting its designated use.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for stream bottom deposits on El Rito Creek.

Total Organic Carbon (TOC): The exceedence ratios are as follows: spring 0/2, summer 0/2 and fall 1/2. The cumulative exceedence ratio for this reach is 1/6. This reach is full support, impacts observed.

Add to the 305(b) report as FSIO.

28. El Rito Creek below El Rito (WQS 2113)

2000 ACTION:

Metals (Al chronic): For the spring run, the 4-day average was 536.25ug/l of dissolved aluminum. The chronic criterion is 87ug/l.

A new listing will be added for metals (Al chronic) for this reach

29. Rio Vallecitos from the confluence with the Rio Tusas to its headwaters (WQS 2112, WBS URG2-10200)

Listed for metals (copper and zinc acute, aluminum chronic), temperature, total phosphorus, turbidity

and stream bottom deposits. Data is available from six stations on this reach. For copper, zinc, and aluminum 1/1 exceedence is noted at station 6029 which is identified as being immediately below a gypsum mine drain. All other stations have a cumulative ratio of 0/10 for each parameter. Temperature at the stations is 1/3 for both downstream stations and 0/10 at the upstream stations. For total phosphorus the ratios are 1/1 and 1/3 at the two stations immediately below the mine and 0/12 for all others. Turbidity is variable throughout with ratios of 0/1, 0/1, 1/1, 1/1, 1/1, and 0/1.

1998 ACTION: Because the impacts noted were attributable to a "point source these minimal data sets will be considered sufficient to cause Partially Supporting listing for aluminum, copper, and zinc. The reach will be listed as Full Support, Impacts Observed for temperature, total phosphorus, and turbidity on the 1998 305(b) list. The reach will continue to be listed on the 303(d) list as Partial Support for stream bottom deposits.

2000 ACTION:

Temperature: Two thermographs were deployed on this reach. The upper thermograph exceeded the HQCWF criterion 80/3,030 times with a maximum temperature of 22.46°C. This site exceeded the Temperature Protocol for hours of exceedence duration > 4hours, but no more than six hours in a 24-hour cycle, and for no more than three consecutive days. The lower thermograph exceeded the HQCWF criterion 413/3,031 times with a maximum temperature of 24.53°C. This site exceeded the Temperature Protocol for the one-time maximum exceedence of 23°C.

Previously listed in the 305(b) report as full support, impacts observed, temperature will be added as a cause of non-support for this reach

Metals (Al chronic): There are two stations on this reach. For the spring run, the 4-day average at the upper station was 750ug/l of dissolved aluminum while the lower station had a 4-day average of 555ug/l. The chronic criterion is 87ug/l.

Metals (Al chronic) will be retained as a cause of non-support

Metals (Al acute): In the spring run, the upper station on this reach had an exceedence ratio of 2/4 (900ug/l) of the acute criteria for dissolved Al. The summer run had an exceedence ratio of 0/4 and the fall run also had an

exceedence ratio of 0/4. The acute criteria for this reach is 750ug/l. The cumulative exceedence ratio for this reach is 2/12 which makes it partially supporting.

Metals (Al acute) will be retained as a cause of non-support

Turbidity: This reach is characterized by two stations. The exceedence ratio for this reach is as follows: spring 8/8, summer 0/4 and fall 0/4. The cumulative exceedence ratio for this reach is 8/16. The standard for this reach is 10NTU. This reach is not supported.

Turbidity will be added as a cause of non-support for this reach

Stream Bottom Deposits: One station was evaluated along this reach. The reach had 10% fines <2mm (FS) and an embeddedness of 33% (FS). According to the Assessment Protocol, this reach is considered fully supporting its designated use.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for stream bottom deposits on the Rio Vallecitos.

Total Phosphorus: Listed as FSIO in the 1998 assessment, there is no longer a standard associated with total phosphorus. The Nutrient Assessment Protocol will be used to assess nutrient loading on this reach.

Total Organic Carbon (TOC): This reach is characterized by two stations. Exceedence ratios are as follows: spring 0/8, summer 0/4 and fall 2/3. The cumulative exceedence ratio for this reach is 2/15. This reach is partially supporting.

TOC will be added as a cause of non-support

30. Rio Tusas from the confluence with the Rio Vallecitos to the headwaters (WQS 2113, WBS URG2-10300)

Listed for turbidity and stream bottom deposits. There are no numeric turbidity criteria for this warmwater fishery.

1998 ACTION: Turbidity will be removed as a cause of non-support for this reach. The reach will continue to be listed on the 303(d) list as Partial Support for Stream Bottom Deposits.

2000 ACTION:

Stream Bottom Deposits: Two stations were used to evaluate this reach. The upper station, above Las Tablas, had 39% fines <2mm (PS). The lower station, at Madera, had 67% fines <2mm (NS). According to the Assessment Protocol, this reach is considered not supporting its designated use.

Stream bottom deposits will be retained as a cause of non-support for this reach

31. Cañones Creek from the inflow to Abiquiu Reservoir to the headwaters (WQS 2116, WBS URG2-12000)

Listed for metals (aluminum), total phosphorus and turbidity. The ratio for aluminum data is 1/1 for acute levels of aluminum. Total phosphorus and turbidity data both have ratios of 5/5. This reach was included in a 1991 biological survey and was rated as only 36% of the reference site. The site had a degraded habitat as a result of loss of riparian habitat, irrigation return flows, and impacts from the community of Cañones.

1998 ACTION: This reach is listed as Not Supporting designated uses with aluminum, total phosphorus, and turbidity as the cause.

2000 ACTION:

Temperature: Two thermographs were deployed on this reach. The upper thermograph exceeded the HQCWF criterion 19/3,984 times with a maximum temperature of 26.19°C. This site exceeded the Temperature Protocol for the one-time maximum exceedence of 23°C. The lower thermograph was lost.

Temperature will be added as a cause of non-support for this reach

Turbidity: This reach is characterized by two stations. Exceedence ratios are as follows: spring 0/8, summer 2/4 and fall1/4. The cumulative exceedence ratio for this reach is 3/16. The standard is 25NTU.

Turbidity will be retained as a cause of non-support

Total Phosphorus: Total phosphorus no longer has a standard associated with it. The Nutrient Assessment Protocol will be

used to assess nutrient loading on this reach.

Total Organic Carbon (TOC): This reach is characterized by two stations. The exceedence ratio is as follows: spring 2/8, summer 0/4 and fall 3/4. The cumulative exceedence ratio for this reach is 5/16. The standard is 7mg/L. This reach is not supported.

TOC will be added as a cause of non-support on this reach

Fecal Coliform: The exceedence ratio for this reach is as follows: spring 1/1, summer 1/1 and fall 0/1. The cumulative exceedence ratio for this reach is 2/3. The standard is 200/100ml.

Fecal coliform will be added as a cause of non-support on this reach

Metals (Al chronic): For the spring run, the 4-day average was 167.5ug/l of dissolved aluminum. The chronic criterion is 87ug/l.

Metals (Al chronic) will be retained as a cause of non-support

32. Chihuahuenos Creek from the mouth on Cañones Creek to the headwaters (WBS URG2-12300, WQS 2116)

Previously listed for stream bottom deposits, turbidity, reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits and turbidity as the cause of non-support.

2000 ACTION:

Turbidity: Field data show an exceedence ratio of 0/6 for turbidity on this reach.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for turbidity on Chihuahuenos Creek.

Stream Bottom Deposits: One station was evaluated along this reach. The reach had 54% fines <2mm (NS). According to the

Assessment Protocol, this reach is considered not supporting its designated use.

Stream bottom deposits will be retained as a cause of non-support for this reach

Total Organic Carbon (TOC): The exceedence ratios are as follows: spring 0/4, summer 0/2 and fall 1/2. The cumulative exceedence ratio for this reach is 1/8. This reach is full support, impacts observed.

Add to the 305(b) report as FSIO.

33. Polvadera Creek from the mouth on Cañones Creek to the headwaters (WBS URG2-12100, WQS 2116)

Previously listed for stream bottom deposits, turbidity, reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits and turbidity as the cause of non-support.

2000 ACTION:

Turbidity: Field data show an exceedence ratio of 0/6 for turbidity on this reach.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for turbidity on Polvadera Creek.

Stream Bottom Deposits: One station was evaluated along this reach. The reach had 71% fines <2mm (NS). According to the Assessment Protocol, this reach is considered not supporting its designated use.

Stream bottom deposits will be retained as a cause of non-support for this reach

Temperature: The exceedence ratio on this reach is as follows: spring 0/4, summer 2/2 and fall 0/2. The cumulative exceedence ratio on this reach is 2/8. This reach is partially supported.

Temperature will be added to this reach as a cause of non-support

Total Organic Carbon (TOC): The exceedence ratios are as follows: spring 0/4, summer 0/2 and fall 1/2. The cumulative exceedence ratio for this reach is 1/8. This reach is full support, impacts observed.

Add to the 305(b) report as FSIO.

34. Clear Creek from mouth on Rio Gallina to headwaters (WBS URG2-20250, WQS 2116)

Previously listed for stream bottom deposits and turbidity. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits and turbidity as the cause of non-support.

2000 ACTION:

Turbidity: Field data show an exceedence ratio of 0/6 for turbidity on this reach.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for turbidity on Clear Creek.

Stream Bottom Deposits: One station was evaluated along this reach. The reach had 51% fines <2mm (NS). According to the Assessment Protocol, this reach is considered not supporting its designated use do to the high level of fines

Stream bottom deposits will be retained as a cause of non-support

35. Cecilia Canyon Creek from the mouth on Rio Capulin to San Pedro Parks Wilderness (WBS URG2-20211, WQS 2116)

Previously listed for stream bottom deposits, turbidity, reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits and turbidity as the cause of non-support.

2000 ACTION:

Turbidity: Field data show an exceedence ratio of 0/6 for turbidity on this reach.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for turbidity on Cecilia Canyon Creek.

Stream Bottom Deposits: One station was evaluated along this reach. The reach had 40% fines <2mm (PS) and an embeddedness of 30%(FS). According to the Assessment Protocol, this reach is considered partially supporting its designated use.

Stream bottom deposits will be retained as a cause of non-support

36. Rio Gallina from confluence with Rio Capulin to headwaters (WQS 2116, WBS URG2-20200)

Previously listed for turbidity, nutrients and stream bottom deposits. Turbidity data indicate full support of the criteria with a 0/5 ratio. Total phosphorus data have a ratio of 2/5.

1998 ACTION: Turbidity is removed as a cause of non support for this reach. Total phosphorus is added as a cause of non-support. Because it is likely that the nutrients listing is related to the total phosphorus listing, nutrients will no longer be listed as a cause of non-support. The reach will continue to be listed on the 303(d) list as Not Supporting for stream bottom deposits.

2000 ACTION:

Stream Bottom Deposits: Two stations were used to evaluate this reach. The upper station, at the headwaters, had 44% fines <2mm (NS). The lower station, at Skull Ranch, had 88% fines <2mm (NS). According to the Assessment Protocol, this reach is considered not supporting its designated use.

Stream bottom deposits will be retained as a cause of non-support for this reach

37. Rio Puerco de Chama from Abiquiu Reservoir to Poleo Creek (WQS 2116, WBS URG2-11100)

2000 ACTION:

Temperature: The thermograph which was deployed at Youngsville was lost. The exceedence ratio for this reach is as follows: spring 0/4 summer 2/2 and fall 0/2. The cumulative exceedence ratio for this reach is 2/8. This reach is partially supported.

A new listing will be added for temperature on this reach of the Rio Puerco de Chama

Fecal Coliform: The exceedence ratio for this reach is as follows: spring 1/1, summer 1/1 and fall 0/1. The cumulative exceedence ratio for this reach is 2/3. The standard is 400/100ml.

Fecal coliform will be added as a cause of non-support on this reach of the Rio Puerco de Chama

DO: The exceedence ratio for this reach is as follows: spring 0/4, summer 0/2 and fall 1/2. The cumulative exceedence ratio for this reach is 1/8.

Add to the 305(b) report as FSIO.

38. Rio Puerco de Chama from Poleo Creek to the headwaters (WQS 2116, WBS URG2-11100)

Listed for total ammonia, total phosphorus and stream bottom deposits. Total ammonia and total phosphorus data from one station (URG116.010040) in 1991 indicate the fishery use is full support as there were no exceedences of criteria.

1998 ACTION: Total ammonia and total phosphorus will be removed as a cause of non-support. The reach will continue to be listed on the 303(d) list as Partial Support for stream bottom deposits.

2000 ACTION:

Stream Bottom Deposits: No data was collected to either verify or remove this listing.

Stream bottom deposits will be retained as a cause of non-support

Total Organic Carbon (TOC): The exceedence ratios are as follows: spring 0/1, summer 1/1 and fall 1/1. The cumulative exceedence ratio for this reach is 2/3. This reach is not supporting.

TOC will be added as a cause of non-support

39. Poleo Creek from the mouth on the Rio Puerco de Chama to the headwaters (WQS 2116, URG2-11210)

Listing based on one station at Forest Road 103 (URG116.010050, 1991 data). Total phosphorus and turbidity data, 4/5 and 5/5, exceed the criteria values. All other parameters are below criteria values.

1998 ACTION: This reach will be listed as Not Supported with total phosphorus and turbidity as causes.

2000 ACTION:

Total Phosphorus: Total phosphorus no longer has a standard associated with it. The Nutrient Assessment Protocol will be used to assess nutrient loading on this reach.

Turbidity: The exceedence ratio on this reach is as follows: spring 4/4, summer 1/2 and fall 0/2. The cumulative exceedence ratio on this reach is 5/8. The standard is 25 NTU. This reach is not supported.

Turbidity will be retained as a cause of non-support

Total Organic Carbon (TOC): The exceedence ratios are as follows: spring 0/4, summer 1/2 and fall 2/2. The cumulative exceedence ratio for this reach is 3/8. This reach is not supporting.

TOC will be added as a cause of non-support

40. Rito Encinco from the mouth on the Rio Puerco de Chama to the headwaters (WQS 2116, WBS URG2-11110)

Listing based on 5/5 exceedences for total phosphorus and turbidity.

1998 ACTION: This reach will be listed as Not Supported with total phosphorus and turbidity as causes.

2000 ACTION:

Total Phosphorus: Total phosphorus no longer has a standard associated with it. The Nutrient Assessment Protocol will be used to assess nutrient loading on this reach.

Turbidity: The exceedence ratio for this reach is as follows: spring 1/4, summer 0/2 and fall 0/2. The cumulative exceedence ratio for this reach is 1/8. The standard is 25 NTU. This reach is full support, impacts observed.

Add to the 305(b) report as FSIO.

Conductivity: The exceedence ratio on this reach is as follows: spring 0/4, summer 0/2 and fall 1/2. The cumulative exceedence ratio on this reach is 1/8. The standard is 500 umhos. This reach is full support, impacts observed,

Add to the 305(b) report as FSIO.

Total Organic Carbon (TOC): The exceedence ratios are as follows: spring 0/4, summer 0/2 and fall 2/2. The cumulative exceedence ratio for this reach is 2/8. This reach is partially supporting.

TOC will be added as a cause of non-support

41. Coyote Creek from the mouth on the Rio Puerco de Chama to the headwaters (WQS 2116, WBS URG2-11120)

Listing based on 5/5 exceedences for total phosphorus and turbidity. A biological assessment was conducted on Coyote Creek in 1991. The station was found to be NS (56%) as compared to the reference station.

1998 ACTION: This reach will be listed as Not Supported with total phosphorus and turbidity as causes.

2000 ACTION:

Stream Bottom Deposits: One station was evaluated along this reach. The reach had 39% fines <2mm (PS). According to the Assessment Protocol, this reach is considered partially supporting its designated use.

Stream bottom deposits will be added as a cause of non-support

Total Phosphorus: Total phosphorus no longer has a standard associated with it. The Nutrient Assessment Protocol will be used to assess nutrient loading on this reach.

Turbidity: Field data show an exceedence ratio of 0/6 for turbidity on this reach.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for turbidity on Coyote Creek.

Temperature: The exceedence for this reach is as follows: spring 0/4, summer 1/2, and fall 0/2. The cumulative exceedence ratio on this reach is 1/8. The standard for this reach is 20°C. This reach is full support, impacts observed.

Add to the 305(b) report as FSIO.

Total Organic Carbon (TOC): The exceedence ratio for this reach is as follows: spring 4/4, summer 0/2 and fall 2/2. The cumulative exceedence ratio for this reach is 6/8. The standard is 7mg/L. This reach is not supported.

TOC will be added as a cause of non-support on this reach

42. Rito Resumidero from the mouth on Rio Puerco de Chama to the headwaters (WQS 2116, URG2-11220)

Previously listed for total ammonia, total organic carbon and stream bottom deposits. Ammonia data from 1986 have ratios of 0/6 and 0/6. Total organic carbon data from the same event are 1/5 and 1/5.

1998 ACTION: Total ammonia will be removed as a cause of non-support for this reach. The reach will be listed on the 1998 305(b) list as Full Support, Impacts Observed with total organic carbon as the cause. The reach will continue to be listed on the 303(d) list as Not Supporting for stream bottom deposits.

2000 ACTION:

Stream Bottom Deposits: One station was evaluated along this reach. The reach had 30% fines <2mm (PS). According to the Assessment Protocol, this reach is considered partially supporting its designated use do to the moderate level of fines.

Stream bottom deposits will be retained as a cause of non-support for this reach

Total Organic Carbon (TOC): The exceedence ratios are as follows: spring 0/4, summer 0/2 and fall 2/2. The cumulative exceedence ratio for this reach is 2/8. This reach is partially supporting.

TOC will be added as a cause of non-support

43. Rito Redondo from the mouth on the Rito Resumidero to the headwaters (WQS 2116, WBS URG2-11221)

Previously listed for total organic carbon and stream bottom deposits. Ratios for total organic carbon are 2/5 and 1/5 from a 1986 survey.

1998 ACTION: The reach is listed as Partially Supporting with total organic carbon and stream bottom deposits as the cause of non-support.

2000 ACTION:

Stream Bottom Deposits: One station was evaluated along this reach. The reach had 19% fines <2mm (FS) and an embeddedness of 25%(FS). According to the Assessment Protocol, this reach is considered fully supporting its designated use.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for stream bottom deposits on Rito Redondo.

Total Organic Carbon (TOC): The exceedence ratio on this reach is as follows: spring 0/4, summer 2/2 and fall 2/2. The cumulative exceedence ratio for this reach is 4/8. The standard is 7mg/L. This reach is not supported.

TOC will be retained as a cause of non-support

44. Embudo Creek from mouth on the Rio Grande to the border of Picuris Pueblo - (WBS URG1-11000, WQS 2111)

Listed for metals (chronic Al), turbidity, temperature, and stream bottom deposits. There are 4 sampling stations from a 1994 survey used to assess this reach. Temperature values were: 0/17, 1/9, 0/9 and 0/9. In 5-10 year data the values were similar. There appears to be no justification for a temperature listing on this reach. Aluminum exceeded the chronic screening criteria at stations URG111.021505 (2/5) and URG111.021590 (2/3) with similar results from 5-10 year data. Turbidity exceeded the criteria in 2/9 (22%) of the samples. Embudo Creek at USGS gauge station was sampled for macroinvertebrates in 1994. This station was NS (54%) with a habitat score of 36% compared to the reference. The write-up cites severe siltation as a cause of non-support.

1998 ACTION: Temperature will be removed as a cause of non-support for this reach. The reach will continue to be listed as Not Supported for turbidity, aluminum, and stream bottom deposits.

2000 ACTION: None

45. Santa Cruz River from mouth on Rio Grande to Santa Cruz Dam, (WBS URG1-10500, WQS 2111)

Previously listed for stream bottom deposits and turbidity.

1998 ACTION: The reach will continue to be listed as Not Supported for Stream bottom deposits, turbidity and total phosphorus.

2000 ACTION: The Santa Cruz River from the mouth on the Rio Grande to Santa Cruz Dam was removed from the draft 303(d) list believing that the entire reach was on Santa Clara Pueblo land. New information shows that all but the lower two miles are on private or BLM land. The Santa Cruz River will be put back on the list with all but the lower two miles as the impaired reach.

The mileage will be adjusted on this reach of the Santa Cruz River to reflect the change.

46. Comanche Creek from the mouth on Costilla Creek upstream to Little Costilla Creek (WBS URG1-30500, WQS 2120)

Listed for total phosphorus, metals (Al, chronic), and stream bottom deposits. Some total phosphorus exceedences were recorded from 5-10 year data (1/16,1/4,1/12,3/12,1/10,2/10). Nonpoint source projects have been implemented in this watershed. Eight stations have been sampled within 5 years with no exceedences seen for total phosphorus. This is a total of 0/15 samples at the same stations sampled previously. Results for aluminum are similar which is expected since the source of phosphorus and aluminum in this watershed is from eroding soils. In the 5-10 year time period data ratios were 2/6, 0/3, 2/6, 2/6, 2/6, 2/7, and 2/6. In the last 5 years the data ratios are 0/2, 1/2, 1/2, 0/1, 0/2, and 0/1.

1998 ACTION: This reach is listed as Partially Supported on the 303(d) list with total phosphorus, aluminum, and stream bottom deposits as the cause.

2000 ACTION: None

47. San Antonio River from mouth on Los Pinos River to headwaters (WBS URG1-50100, WQS 2120)

Previously listed for stream bottom deposits, reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits as the cause of non-support.

2000 ACTION: None

48. Costilla Creek from the NM-CO border to the irrigation diversion above Costilla - (WBS URG1-40000, WQS 2120)

Previously listed for stream bottom deposits only. The assessment review found that turbidity and metals (Al, acute) should be added to this listing due to 3/9 (33%) of turbidity readings within 5 years being above the criteria. 1/6 values exceeded the acute aluminum criteria and 2/6 (33%) exceeded the chronic aluminum criteria.

1998 ACTION: This reach is listed as Partially Supported on the 303(d) list with turbidity, aluminum, and stream bottom deposits as the cause.

2000 ACTION: None

49. Costilla Creek from Comanche Creek to Costilla Dam - (WBS URG1-30000, WBS 2120)

Previously listed for metals (Al, chronic) and turbidity. Turbidity values for 0-10 years at 3 stations were 1/17, 0/2 and 0/4. Aluminum has been recorded at acute levels at stations Costilla065 and Costilla095.

1998 ACTION: Remove turbidity as a cause on non-support for this reach. Aluminum will continue to be listed as a cause of non-support.

2000 ACTION: None

50. Cordova Creek from the mouth on Costilla Creek to headwaters - (WBS URG1-30300, WQS 2120)

Previously listed for turbidity, stream bottom deposits and total phosphorus. 0/9 samples at 2 stations show exceedences of the turbidity criteria. Total phosphorus is not supporting (5/10) at station the downstream station while the upstream station is fully supporting (0/3) for total phosphorus.

1998 ACTION: Turbidity will be removed as a cause of non-support. The reach will continue to be listed as Not Supported for total phosphorus and stream bottom deposits on the 1998 303(d) list.

2000 ACTION:

Total Phosphorus: This stream is severely impacted by increased sedimentation from the road which was built in the original stream channel up to the Ski Rio Ski area. The stream also impacts the road by undercutting highly erosive banks along the road. Increased sedimentation may also be from land development, recreation and upstream impoundments.

A TMDL was developed for Cordova Creek to address total phosphorus.

Stream Bottom Deposits: This stream is severely impacted by increased sedimentation from the road which was built in the original stream channel up to the Ski Rio Ski area. The stream also impacts the road by undercutting highly erosive banks along the road. Increased sedimentation may also be from land development, recreation and upstream impoundments.

A TMDL was developed for Cordova Creek to address stream bottom deposits.

Turbidity: This stream is severely impacted by increased sedimentation from the road which was built in the original stream channel up to the Ski Rio Ski area. The stream also impacts the road by undercutting highly erosive banks along the road. Increased sedimentation may also be from land development, recreation and upstream impoundments.

A TMDL was developed for Cordova Creek to address turbidity.

51. Red River from mouth on Rio Grande to Placer Creek (WBS URG1-20400, WQS 2119)

Previously listed for metals (Al, Cd, Zn), turbidity, and stream bottom deposits. Aluminum has been sampled at numerous stations along this reach. The ratios for chronic impacts at these events are 0/6, 1/3, 1/6, 0/3, 0/3, 2/8, 0/8, 1/8, and 0/6. For cadmium (chronic) the ratios are 0/6, 0/3, 0/6, 0/3, 0/3, 0/8, 0/8, 0/8, and 0/6. There have been no acute exceedences of aluminum or cadmium within the last 10 years. However, there are continuing concerns about these metals from groundwater seeps to the Red River. The reach is not supporting for zinc, at acute levels, at two stations (HRG24, 2/6 and HRG25, 2/3) and fully supporting at all other stations. A March 1996 report by NMED documented high concentrations of aluminum, cadmium, copper, and zinc in groundwater seeps to the Red River (Red River Groundwater Investigation, March 1996). These concentrations exceeded acute criteria and indicated that acute criteria would be exceeded in the Red River. At station URG120.028025, toxicity testing indicated chronic toxicity in a water sample collected on April 15, 1997. A biological survey was conducted in 1992 at eight stations along the Red River. Seven of these stations are in the referenced reach. The biology at stations 2 and 3 which are above the town of Red River were Full Support (90 and 97% respectively). Station 3 which is in town but above the WWTP was found to be Full Support, Impacts Observed. Station 4 downstream from the WWTP was only Partially Supporting (66%). All stations below this point were Not Supporting. Stations 6, 7, and 8 below Molycorp were 45%, 37%, and 57% of the reference. The habitat assessments for these stations show a similar pattern. According to the survey write-up, the stream bottom habitats show a downstream pattern of decline due to channel alteration, loss of vegetation and a reduction of available stream bottom substrate due to mineral deposition. Turbidity is Full Support, Impacts Observed at all stations (2/16,1/11,2/15,1/4,1/12).

1998 ACTION: This reach is included on the 1998 303(d) list as Not Supported with metals and stream bottom deposits as the cause of non-support. Turbidity has been dropped as a cause of non-support but will be listed on the 1998 305(b) list as Full Support, Impacts Observed.

2000 ACTION:

Metals: Seven Red River mainstem stations were sampled in the spring. Station HRG27 had an exceedence ratio for chronic Al of 4/4 and exceedence ratios for chronic Zn (0/4), Cd (0/4) and Cu (0/4). Station HRG25 had an exceedence ratio for chronic Al of 4/4 and exceedence ratios for chronic Zn (0/4), Cd (0/4) and Cu (0/4). Station URG120.028045 had an exceedence ratio for chronic Al of 4/4 and exceedence ratios for chronic Zn (0/4), Cd (0/4) and Cu (0/4). Station URG23.3 had an exceedence ratio for chronic Al of 4/4 and exceedence ratios for chronic Zn (0/4), Cd (0/4) and Cu (0/4). Station HRG23.1 had an

exceedence ratio for chronic Al of 4/4 and exceedence ratios for chronic Zn (0/4), Cd (0/4) and Cu (0/4) and Station URG120.028069 had an exceedence ratio for chronic Al of 4/4 and exceedence ratios for chronic Zn (0/4), Cd (0/4) and Cu (0/4).

Al will be retained as a cause of non support at all stations. Zn, Cd and Cu will be removed as causes of non support

Stream Bottom Deposits:

Nine stations were evaluated along this reach. Stations are listed from the lowest to highest:
RR below the fish hatchery had 17% fines <2mm (FS) and an embeddedness of 47.8%(FSIO), RR above fish hatchery had 10% fines <2mm (FS) and an embeddedness of 38.2%(FS), RR above Questa Ranger Station had 11% fines <2mm (FS) and an embeddedness of 57.9%(PS), RR@GoatHill Gulch Campground had 24% fines <2mm (FSIO) and an embeddedness of 49.4%(FSIO), RR@Bobita above Molycorp had 17% fines <2mm (FS) and an embeddedness of 34.9%(FS), RR below Elephant Rock near Fawn Lakes had 12% fines <2mm (FS) and an embeddedness of 31.3%(FS), RR@Junebug Campground had 16% fines <2mm (FS) and an embeddedness of 55.4%(PS), RR@Zwergle Dam had 6% fines <2mm (FS) and an embeddedness of 30.5%(FS) and West Fork of the RR had 6% fines <2mm (FS) and an embeddedness of 37.3%(FS).
Two out of the nine stations are considered partially supporting their designated use (22%). According to the Assessment Protocol, This reach is considered full support, impacts observed.

Add to the 305(b) report as FSIO.

52. Red River from Placer Creek to the headwaters (WQS 2119)

2000 ACTION:

Metals (Al chronic):

Station HRG22 was sampled in the spring. The exceedence ratio for chronic Al was 8/8 with a mean concentration of 254ug/l.

A new listing will be added for metals (Al chronic).

53. Rio del Pueblo from Picuris Pueblo boundary to headwaters (WBS URG1-11200, WQS 2120)

Previously listed for turbidity, nutrients and stream bottom deposits. This station was monitored as part of a 1994 Intensive Stream Survey. The aggregated ratio of exceedences for turbidity within the last five years is 1/44 and 0/12 in the 5-10 year interval. A biological assessment was conducted on this reach in 1994. The biological assessment found one station (RP050) to be Full Support, Impacts Observed (78% of reference), while another station (RP25) was partial support (68% of reference) for the fishery use. The Hilsenhoff Biotic Index, which is a measure of organic pollution (i.e. nutrients) for both of these sites indicated that nutrient enrichment was not a problem, (2.56 for RP050 and 2.17 for RP25). The ROD will be revised to reflect this information. This reach will continue to be listed as Partially Supporting with stream bottom deposits as the cause of non-support.

1998 ACTION: Turbidity and nutrients have been removed as a source of non-support for this reach. The reach is included as Partially Supported in the 1998 303(d) report with stream bottom deposits as the cause. **Rename this reach from *Rio Pueblo from the confluence with the Rio Santa Barbara to headwaters* to the above name**.

2000 ACTION: None

54. Rio Hondo from mouth on Rio Grande to Lake Fork (WBS URG1-20300, WQS 2120)

Previously listed for temperature, pH, total ammonia, and stream bottom deposits. The cumulative ratio of temperature over the last ten years is 0/74. The cumulative ratio of pH measurements over the last ten years is 0/73. The cumulative ratio of measurements for total ammonia over the past ten years is 0/78. The stream bottom deposits listing was for runoff from the ski area parking lot. BMPs have been put into place and the biological score for the station located immediately below the parking lot in a 1992 survey was 83% of the reference score. Stream bottom deposits should be removed as a cause of nonsupport. The nutrient listing is limited to one station, HON8, which is immediately below the WWTP. The biological assessment shows a high nutrient index at this station. There is an existing TMDL in place on this reach for nutrients.

1998 ACTION: All previously listed parameters have been removed as causes of non-support. This reach has been removed from the 1998 303(d) list.

2000 ACTION: None

55. Bitter Creek from mouth on Red River to headwaters (WBS URG1-20450, WQS 2120)

Previously listed for metals (aluminum), stream bottom deposits, reduction of riparian vegetation and

streambank destabilization. Aluminum data indicate an exceedence ratio of 3/3 at station URG120.028530.

1998 ACTION: The reach will be listed for aluminum at station URG120.028530 and stream bottom deposits.

2000 ACTION:

Metals (Al acute): Station URG120.028070 was sampled in the spring. The exceedence ratio for Al was 3/4 with an acute level of 750ug/L.

Metals (Al acute) will be retained as a cause of non-support

Stream Bottom Deposits: Sand and gravel operation plus land development above the gravel operations have lead to very high levels of sediment transport and deposition throughout this reach. An ongoing 319(h) program is attempting to stabilize this area.

Stream bottom deposits will be retained as a cause of non-support

56. Pioneer Creek from mouth on Red River to headwaters (WBS URG1-20430, WQS 2120)

Previously listed for turbidity, stream bottom deposits, reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits and turbidity as the cause of non-support.

2000 ACTION:

Stream Bottom Deposits: Excessive bedload was observed during all visits. Pioneer Creek has been channelized. Its mouth has been moved 1/2 to 1/4 miles downstream (personal communication with local residents in October 1999). This channelization has reduces the gradient and has greatly increased the amount of sediment deposition in this part of the creek.

Stream bottom deposits will be retained as a cause of non-support

Turbidity: Station URG120.028065 was sampled in the spring. The exceedence ratio for turbidity was 4/4.

Turbidity will be retained as a cause of non-support

57. Placer Creek from mouth on Red River to headwaters (WBS URG1-20510, WQS 2120)

Previously listed for stream bottom deposits, reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits as the cause of non-support.

2000 ACTION:

Stream Bottom Deposits: The bottom 1/2 mile of this runs parallel to a National Forest Service road and eventually runs down the middle of the road delivering high sediment loads to the Red River.

Stream bottom deposits will be retained as a cause of non-support

Metals (Al acute): Station RR09 was sampled in the spring. The exceedence ratio for Al was 4/4 with an acute level of 1075ug/L.

A new listing will be added for metals (Al acute).

58. Cabresto Creek from mouth on Red River to headwaters (WBS URG1-20410, WQS 2120)

Previously listed for turbidity and stream bottom deposits. There have been no exceedences (0/5) of the turbidity criteria in the last five years. The cumulative turbidity ratio from three stations for 10 years is 1/21.

1998 ACTION: Turbidity will be removed as a cause of non-support. This reach is listed as Partially Supported on the 303(d) list with stream bottom deposits as the cause.

2000 ACTION:

Metals (Al chronic): Station URG120.028017 was sampled in the spring. The exceedence ratio for Al was 4/4.

A new listing will be added for metals (Al chronic).

Stream Bottom Deposits: One station was evaluated along this reach. The reach had 7% fines <2mm (FS) and an embeddedness of 38.3%(FS).

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for stream bottom deposits on Cabresto Creek.

59. Rio Grande del Rancho from mouth on the Rio Pueblo de Taos to Hwy 518 (WBS URG1-20110, WQS 2120)

New listing for conductivity turbidity, and stream bottom deposits. There are no ten-year data for turbidity or conductivity. Going back to 1986 there are four data points for conductivity. There are no exceedences of the criteria. Conductivity is fully supporting. There are three data points for turbidity from 1986-87. All values are less than the criteria, the maximum value is 6.2 and the mean value is 2.3 NTU.

1998 ACTION: Turbidity and conductivity are removed from the 1998 303(d) list as causes of non-support. This reach is listed as Partially Supported on the 303(d) list with stream bottom deposits as the cause.

2000 ACTION: None

60. Rio Santa Barbara from Picuris Pueblo to USFS Boundary (WBS URG1-11100, WQS 2120)

Listed for stream bottom deposits and metals (Al). At station URG120.022025 there was 1/3 exceedences of the chronic screening criteria for aluminum within the last five years.

1998 ACTION: Aluminum has been removed as a cause of non-support for this reach but will be listed on the 1998 (305) list as Full Support, Impacts Observed. This reach is listed as Partially Supported on the 303(d) list with stream bottom deposits as the cause.

2000 ACTION: None

61. Rio Pueblo de Taos from the mouth on the Rio Grande to Rio Grande del Rancho (WBS URG1-20100, WQS 2119)

Previously listed for temperature, total ammonia, chlorine, and fecal coliform. Temperature is partially supporting at station URG119.023505 with a ratio of 2/10. All other stations show no

exceedences of the criteria. For total ammonia, all stations are fully supporting with the exception of station URG119.23515 (5/11) which is not supporting. For fecal coliform, station URG119.023510 (1/1) is full supporting, impacts observed. Station URG119.023525 (2/2) is partially supporting for fecal coliform. Aluminum should be added as Full Support, Impacts Observed at stations URG119.023505 (1/1) and URG119.23525 (1/1) for the chronic screening criteria. Chlorine was removed because the only identified source of chlorine on the reach was the Taos WWTP. We have no ambient chlorine data. The Taos plant has gone to UV disinfection and no longer uses chlorine.

1998 ACTION: Chlorine has been removed as a cause of non-support. The 1998 303(d) list continues to show this reach as Partially Supported with temperature, total ammonia, and fecal coliform as causes of non-support.

2000 ACTION: None

62. Rio Fernando de Taos from mouth on Rio Pueblo de Taos to headwaters (WBS URG1-20210, WQS 2120)

Previously listed for metals (Al), turbidity, total phosphorus, and stream bottom deposits. The Al listing should be not supporting for the entire reach based on acute ratios of 3/7, 2/4, 2/6, 1/6, and 1/6, 2/9, and 1/6. Ratios for turbidity are 2/8, 1/8, 1/8, 1/7, 1/10, 1/9, 1/8 and 1/8. Ratios for total phosphorus are 2/10, 3/9, 2/9, 2/9, 3/12, 2/11, 2/9, and 3/10. It should be noted that all exceedences come from the same spring runoff event.

1998 ACTION: Turbidity will be removed as a cause of non-support for this reach. The reach will be listed in the 1998 305(b) report as Full Support, Impacts Observed with turbidity as the cause. The 1998 303(d) list continues to show this reach as Partially Supported for aluminum, total phosphorus, and stream bottom deposits.

2000 ACTION: None

63. Ute Creek from confluence with Costilla Creek to headwaters (WBS URG1-30100, WQS 2120)

Not previously listed. Samples collected in 1987 show a 1/4 ratio of exceedences of the total phosphorus criteria.

1998 ACTION: This stream reach will be listed as Full Support, Impacts Observed for total phosphorus on the 1998 305(b) list.

2000 ACTION: None

64. Rio de los Pinos from the NM-CO border to the NM-CO border (WBS Unclassified, WQS 2120)

Previously listed for metals (Al), total phosphorus, temperature and stream bottom deposits. Data on this reach are limited to single grab sample data collected at two times during 1990. The first sampling was during April and the second during August. For temperature, the ratios at four of five sampling stations (URG120.031010, URG120.031020, URG120.031030 and URG120.031040) was 1/2 with all exceedences during the summer sampling. Station URG120.031050 had no exceedences. Temperature will be classified as Full Support, Impacts Observed at the exceeding stations and full support at. URG120.031050. For total phosphorus, the results were similar but with the exceedences occurring during the spring sampling. Stations URG120.031010, URF120.031030 and URG120.031050 all had 1/2 ratios with stations URG120.031020 and URG120.031040 having 0/2 exceedences. For aluminum, only one station had an exceedence. At station URG120.031010, 1/1 samples collected exceeded the screening criteria. There were no exceedences of the acute criteria.

1998 ACTION: This reach will be listed as Full Support, Impacts Observed on the 1998 305(b) list with aluminum, total phosphorus, and temperature as the causes. The reach continues to be listed as Partially Supporting on the 1998 303(d) list with stream bottom deposits as the cause.

2000 ACTION:

Metals (Al): Data reviewed from 8/09/90 shows that the aluminum listing on the Rito de los Pinos is erroneous. The SLD Analytical Report from the 1990 results shows digested aluminum at <0.3 mg/L. The STORET retrieval shows a dissolved aluminum number of 300 ug/L. This is obviously a data entry error and the listing for aluminum will be deleted.

65. Rio Grande River from Cochiti to Angostura (WBS MRG1-10000, WQS 2108)

This segment is on Pueblo land and therefore New Mexico water quality standards do not apply.

1998 ACTION: **DO NOT LIST**

2000 ACTION: None

66. Santa Fe River from the Cochiti Pueblo to the Santa Fe WWTP -(WBS MRG1-10400, WQS 2110)

Listed for metals (Ag, Al, Fe and Cd), turbidity, chlorine, pH, total ammonia, radioactivity, and stream bottom deposits,. Surveys were conducted in 1994, 1995, and 1996. Most data are from the 1995 survey. For Ag, the ratio for chronic screening for grab samples at 6 monitored sites is 0/19. For Al, the ratio for chronic screens at 6 sites is 0/20. For Cd, the ratio for chronic screens at 6 sites is 0/25. Fe is listed but there is no standard for iron. This parameter was evaluated against the EPA criteria of 1.0 mg/l. There were no recent exceedences of this criteria. Data within the last 5 years has a cumulative ratio of 0/58. This data includes a USGS site which is monitored quarterly. For the 3 components that make up radioactivity only one had values greater than the criteria. The ratios for gross alpha at two sites were 1/4 and 1/3. 0/13 samples at the other sites were greater than the criteria. The listing will be modified to show an entry for gross alpha not radioactivity. For turbidity, in the 0-5 year data ratios were 0/11, 0/11, 0/18, 0/ 9, and 0/10. For total ammonia, there were 5 stations with 0-5 year data. The aggregated ratio of these stations is 5/55. 2 stations had ratios which are considered partially supported. For pH, 2 stations had ratios in the Partial to Not Supporting range. Although the chlorine data available are old, there are not more recent data to support a change in the listing. Biological assessments were conducted at four stations on this reach in 1995. Three of the four assessments were NS (36%, 36%, 36%). One station near the confluence with the Rio Grande was Full Support, Impacts Observed. The report cites changes due to hydromodification as the most probable cause of non-support.

1998 ACTION: Silver, aluminum, cadmium, iron, and turbidity have been removed as causes of non-support for this reach. The reach continues to be included on the 1998 303(d) list with total ammonia, pH, gross alpha, chlorine, and stream bottom deposits as causes of non-support.

For fecal coliform, the ratio of exceedences was 1/1, full support, impacts observed. For ammonia, chronic, the ratio of exceedences was 1/5, full support, impacts observed. This reach will sampled in 1998-1999 for the Santa Fe River TMDL Project and thus will remain on the 303(d) list partially supporting for fecal coliform, total ammonia and chlorine.

2000 ACTION:

Turbidity: There were no exceedences of the criterion during the 1998-1999 sampling.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for turbidity on the Santa Fe River.

Metals: There were no exceedences of acute levels or of the 4-day chronic criterion for metals during the 1998-1999 sampling.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for metals on the Santa Fe River.

Total Residual Chlorine: A TMDL has been developed by EPA for total residual chlorine

Total Ammonia: No acute or chronic exceedences of the ammonia criteria were observed during sampling.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for total ammonia on the Santa Fe River.

Gross Alpha: No exceedences of the criterion were observed during the 1998-1999 sampling. Remediation has been completed at the La Bajada Mine Site.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for gross alpha on the Santa Fe River.

Stream Bottom Deposits: This river is characterized by two stations. The upper station, below the WWTP, is a Rosgen F4 stream type with a % fines <2mm of 7% indicating full support. The lower station, at the river preserve, is a Rosgen C4 stream type with a % fines <2mm of 27% indicating a moderate level of impairment.

A TMDL was developed for the Santa Fe River to address stream bottom deposits.

pH: A temporal and spatial pattern has been observed for pH in the stream. pH increases from 7.5 to as high as 9.0 SU approximately 2.5 miles downstream of the WWTP.

Algal growth from nutrient enrichment is the most probable cause of the pH fluctuations. A TMDL will be developed by EPA for pH.

The TMDL document for pH will be developed by EPA.

Fecal Coliform: Fecal coliform was removed from the 1998-2000 303(d) list but remained listed in the 1998 305(b) Report as full support, impacts observed (FSIO). No exceedences (0/4) of the fecal coliform criteria were observed during the 1998-1999 Fall sampling.

Add to the 305(b) report as FSIO.

DO: Problems with DO fluctuations were documented during sampling over several seasons in 1999.

The TMDL document for DO will be developed by EPA.

67. Cienega Creek from the mouth on the Santa Fe to Cienega Village (WBS MRG1-10310, WQS 2110)

Previously listed for fecal coliform and chlorine. There is one sampling station on this reach. All data are from a 1986 survey. For chlorine, the ratio of exceedences was 1/1, full support, impacts observed. For fecal coliform, the ratio of exceedences was 1/1, full support, impacts observed. For ammonia, chronic, the ratio of exceedences was 1/5, full support, impacts observed.

1998 ACTION: This reach will sampled in 1998-1999 for the Santa Fe River TMDL Project and thus will remain on the 303(d) list partially supporting for fecal coliform, total ammonia and chlorine.

2000 ACTION:

Fecal Coliform: No exceedences of the fecal coliform criterion were observed during the Fall sampling. A hog pen in the floodplain of Cienega Creek continues to be a concern. City of Santa Fe sampling from 1995 shows high levels of fecal coliform during high flow events.

This reach will continue to be listed for fecal coliform until data becomes available to allow for de-listing.

Total Residual Chlorine: The SWQB is obtaining an amperiometric titration instrument to evaluate chlorine in the stream.

This reach will continue to be listed for total residual chlorine until data becomes available to allow for de-listing.

Total Ammonia: No exceedences of the ammonia criteria were observed during sampling.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for total ammonia on Cienega Creek.

68. Alamo Creek from the mouth on the Santa Fe River to the headwaters (WBS MRG1-10320, WQS 2110)

Previously listed for metals (unknown). There are no data, historical or otherwise, for this reach.

1998 ACTION: This reach will continue to be listed as partially supporting for metals (unknown) and will be sampled as part of the 1998-1999 for the Santa Fe River TMDL Project.

2000 ACTION:

Metals: Access was limited to the portion of the reach that flows under I-25. On several occasions, across all seasons, SWQB staff went to sample the reach and found that it was not flowing. The portion of Alamo Creek that enters into the Santa Fe River was inaccessible through private lands. Communications with SWQB staff indicate that the listing for metals may have been based on a historic smelter along Alamo Creek. The existence of this smelter is not documented anywhere. Historic data, for 1984, show no exceedences of metals. Also, there were no metals criterion in 1984, they were not promulgated until 1991. However, using today's standards and a hardness of 318, the following calculations can be made. Boron is reported as 160 micrograms or .160 milligrams. Today's standard is 5000 micrograms or 5 milligrams. Cadmium is reported as 4 micrograms/liter (total) and the standard is 3.4 micrograms/liter dissolved. Using the partitioning coefficient, the dissolved concentration is 1.4 micrograms/liter. Chromium is reported as 16 micrograms/liter (total) and the standard is 100 micrograms/liter dissolved. Using the partitioning coefficient, the dissolved concentration is 2.655 micrograms/liter. If there were flow in Alamo Creek, any contributions of metals from Alamo Creek would flow to the Santa Fe River. Downstream from the confluence of Alamo Creek with the Santa Fe River there were no exceedances for any metals in any samples during Fall 1999.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for metals on Alamo Creek.

69. Bluewater Creek - portions on State Lands above Bluewater Reservoir and from private holdings to the headwaters (WBS MRG7-20200, WQS 2107)

Previously listed for metals (Al, Cd, Pb), temperature, turbidity, total phosphorus, and stream bottom deposits. There are five stations which provide assessment data for this reach. For aluminum, there were multiple exceedences of acute criteria at four out of five stations within five years. There were no exceedences of the acute levels for lead. There were limited exceedences of the lead chronic screening criteria. Two stations, MRG106.005010 and MRG106.005030, had exceedence ratios of 1/7 and 1/5 respectively. One exceedence of these criteria is allowable within a 5 year period. Therefore these reaches will be listed as Full Support, Impacts Observed for lead. There were no exceedences of the acute criteria or chronic screening criteria for cadmium at any of the five stations. Temperature is available for four stations. At station MRG106.005045, the exceedences ratio was 3/7 (43%) or not supporting. At stations 5040, 5035, and 5020 the ratios were 1/10, 2/20 and 2/6 respectively. Turbidity is similar. Turbidity will be listed as not supporting. Total phosphorus is partially supporting at six out of nine stations.

1998 ACTION: Lead and cadmium will be removed as causes of non-support on the 1998 303(d) list. The reach will be listed on the 1998 305(b) list as Full Support, Impacts Observed for lead. The reach continues to be included on the 1998 303(d) list for aluminum, temperature, turbidity, total phosphorus, and stream bottom deposits.

2000 ACTION: None

70. Rio San Jose from Horace Springs to Grants wastewater treatment plant (WBS MRG7-20000, WQS 2107)

Listed for metals (Hg, Cd) and total phosphorus. This stream segment is listed as unclassified. The total phosphorus criterion applies only to high quality coldwater fisheries so the total phosphorus listing should be removed. Within the last five years 0/7 samples for mercury exceeded the detection level of 0.1 □g/l. For cadmium the ratios are 0/7 within five years and 0/9 from 5-10 years.

1998 ACTION: Total phosphorus, mercury and cadmium have been removed as causes of non-support for this reach. This reach is not included in the 1998 303(d) list.

2000 ACTION: None

71. Percha Creek from perennial portions above Caballo Reservoir to confluence of Middle and South Forks (WBS LRG1-10100, WQS 2103)

Previously listed for nutrients and stream bottom deposits. There are two sampling stations on this reach. There are no supporting data to justify the nutrients listing per the document titled, ***"Indices of Aquatic Community Integrity of Percha and Tierra Blanca Creeks in Perennial Segments Administered by the US Bureau of Land Management, Sierra County, New Mexico"***. E.D. Weber and R.A. Cole, Department of Fishery and Wildlife Sciences, New Mexico State University, Las Cruces, New Mexico, January 20, 1996.

1998 ACTION: Nutrients will be removed as a cause of non-support for this reach. The reach continues to be listed as Partially Supporting on the 1998 303(d) list with stream bottom deposits as the cause.

2000 ACTION: None

72. Alamosa Creek, perennial portions above Monticello diversion ditch (WBS MRG11-10100, WQS 2103)

Listed for reduction of riparian vegetation and streambank destabilization.

1998 ACTION: The reach continues to be listed as Partially Supporting on the 1998 303(d) list with stream bottom deposits as the cause.

2000 ACTION: None

73. Rio Paguate from inflow to Paguate Reservoir to headwaters (WBS MRG7-10100, WQS 2107)

New listing for metals (Se, Hg), stream bottom deposits and temperature. For selenium 0/16 samples were greater than the acute criteria, but 16/21 within the last ten years exceeded the chronic screening level. This reach is Not Supporting for selenium. For mercury there have been no exceedences of the acute criteria within the last ten years. The exceedences ratio for mercury in the last five years is 0/4 and 1/21 within the last ten years. This reach will be upgraded to Full Support for mercury. Temperature data are limited at several of the stations. USGS station 08349800 is the only station with data within the last ten years. This station is 2/5 within five years and 5/13 within six to ten years. This segment will be listed as Partial Support for temperature.

1998 ACTION: Mercury was removed as a cause of non-support. The reach will be listed as partially supported with selenium, temperature and stream bottom deposits.

2000 ACTION: None

74. Rio Grande from USGS gage at San Marcial to the Rio Puerco (WBS MRG3-10000, WQS 2105)

Previously listed for pesticides, stream bottom deposits and total ammonia. There have been 0/18 exceedences of the total ammonia chronic screening criteria in the past ten years. This reach should be upgraded to full support for total ammonia. In 1987 there was a 1/1 hit for chlordane at station MRG105.000125. There has been no follow-up sampling at this station. This station will be listed as Full Support, Impacts Observed. Two other stations on this reach have ratios of 0/1 and 0/8 for chlordane. These stations will be listed as full support. In a January 9, 1998 letter to NMED, Jim Brooks of the U.S. Fish & Wildlife Service, New Mexico Fishery Resources Office stated that "... a total maximum daily load for siltation in the middle and lower Rio Grande in New Mexico would not improve habitat conditions for the native fish fauna".

1998 ACTION: Stream bottom deposits and ammonia were removed as causes of non-support. The reach was upgraded to Full Support, Impacts Observed and therefore removed from the 303(d) list. It will be listed as Full Support, Impacts Observed on the 305(b) list for chlordane.

2000 ACTION: None

75. Rio Grande from the Rio Puerco to the southern border of Isleta Pueblo (WBS MRG3-20000, WQS 2105)

Previous listed for metals (Hg) and stream bottom deposits. There are three stations for making the assessment. In 1994, these stations had a combined ratio of 0/9 for mercury upgrading the reach to full support. In a January 9, 1998 letter to NMED, Jim Brooks of the U.S. Fish & Wildlife Service, New Mexico Fishery Resources Office stated that "... a total maximum daily load for siltation in the middle and lower Rio Grande in New Mexico would not improve habitat conditions for the native fish fauna".

1998 ACTION: Metals (mercury) and stream bottom deposits were removed as causes of non-support, therefore the reach was removed from the 303(d) list.

2000 ACTION: None

76. Rio Grande from the northern boundary of Isleta Pueblo to the southern boundary of Santa Ana Pueblo (WBS MRG3-30000, WQS 2105, 2105.1)

Previously listed for metals (Al), total ammonia, chlorine, stream bottom deposits and fecal coliform. For aluminum, there are four stations for making the assessment. These stations have ratios of 2/7, 3/6, 2/8, and 2/8 for exceedences of the chronic screening criteria and no exceedences of the acute criteria. All of these data are from a 1991 SWQB survey. Additional information considered to be of greater confidence has recently been issued from the USGS 1994-1996 surveys of the Rio Grande from Isleta Pueblo to the Jemez River. In this database 0/57 Rio Grande samples were found to have dissolved aluminum levels greater than the chronic screening criteria. This reach will be listed as full support for aluminum. For total ammonia there are six stations which may be used for the

assessment. Generally, in a time frame prior to 1988, there were numerous exceedences of the chronic screening criteria for ammonia. In WQS 2105 there are two stations MRG105.005730 and 5740. At station 5730 there were 11/21 samples which exceeded the chronic screening criteria for ammonia from 1988 through 1992. From 1993 through 1997 there has been only one exceedence of the criteria (1/10). A similar pattern is seen at station 5740 where 5/20 1988-1992 samples exceeded the criteria but 0/13 within the last five years have exceeded the criteria. One four-day sampling event in 1988 documented a four-day chronic exceedence at station 5740 in 1988. There have been no four-day sampling events since then. In segment 2105.1 there are no six to ten year data. All data are from 1988 to 1992. Ratios at these stations are 3/19, 0/12, 4/16, and 2/21. Ammonia will continue to be listed as partially supporting until additional sampling information is available. For fecal coliform, in segment 2105, there have been 0/28 samples with values greater than the criteria value. In segment 2105.1, which has a more restrictive criterion, the ratios are 3/9, 1/7, 3/9, and 0/3.

1998 ACTION: Aluminum and stream bottom deposits were removed as causes of non-support. The reach continued to be listed as partially supported with ammonia, chlorine and fecal coliform listed as causes of non-support.

2000 ACTION:

Total Ammonia: The exceedence ratio for total ammonia on this reach was 0/58.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for total ammonia on the Middle Rio Grande.

Fecal Coliform: There are 12 sampling stations on this reach. Station 1, Rio Grande below Angostura Diversion (FS) exceedence ratio was 0/5, **Station 2, Rio Grande at Highway 44 Bridge (NS)** exceedence ratio was 2/5, Station 3, Bernalillo WWTF effluent discharge (FS) exceedence ratio was 0/5, **Station 4, Rio Grande above RRUC #3 (NS)** exceedence ratio was 2/5, **Station 5, RRUC #3 effluent discharge (FSIO)** exceedence ratio was 1/5, **Station 6, Rio Grande above RRUC #2 (NS)** exceedence ratio was 3/7, **Station 7, RRUC #2 effluent discharge (NS)** exceedence ratio was 7/7, **Station 8, Rio Grande above Alameda Bridge (FSIO)** exceedence ratio was 1/7, **Station 9, Rio Grande above Rio Bravo Bridge (NS)** exceedence ratio was 2/7, Station 10, Albuquerque WWTF effluent discharge (FS) exceedence ratio was 0/7, **Station 11, Rio Grande above I-25 Bridge (NS)** exceedence ratio was 2/7 **and Station 12, Rio Grande above Isleta Diversion**

(FSIO) exceedence ratio was 1/7.

Fecal coliform will be retained as a cause of non-support for this reach

77. Rito Cañon de Frijoles from mouth on Rio Grande to headwaters (WBS MRG1-20100, WQS 2118)

The segment was originally listed due to the levels of DDT in fish that led the National Park Service to issue a fishing closure. A 1996 consultant report stated that remediation of DDT contaminated soil and sediment was not warranted on the basis of ecological risk, potential human health impacts, or direct risk to cultural resources.

1998 ACTION: Because the fishing closure is still in effect, the stream was retained on the list.

2000 ACTION: None

78. Rio Puerco from Rito Olguin to headwaters (WBS MRG4-20000, WQS 2107)

Previously listed for temperature and stream bottom deposits. The exceedence ratios at two stations on this reach are 4/6 and 4/5.

1998 ACTION: The listing was not changed.

2000 ACTION: None

79. Rio Puerco from the mouth on the Rio Grande to Rito Olguin (WBS MRG4-10000, WQS 2105)

Previously listed for stream bottom deposits. The Rio Puerco from the mouth on the Rio Grande to Rito Olguin (Rio Grande, 2105), E, was listed for not fully supporting the use of limited warmwater fishery (LWWF) and the cause of not meeting this use was listed as stream bottom deposits. The definition of a LWWF on page 41, of the ***State of New Mexico Standards for Interstate and Intrastate Streams,*** is as follows:

> LWWF a stream reach where **intermittent** flow may severely limit the ability of the reach to sustain a natural fish population on a continuous annual basis; or a stream where historical data indicate that water temperature may routinely exceed 32.2□C (90□F)

NMED/SWQB solicited input from New Mexico Department of Game & Fish, U.S. Fish & Wildlife Service, University of New Mexico, Department of Biology and New Mexico State University, Department of Fishery and Wildlife Sciences concerning the stream bottom deposits (siltation)

issues. The following questions were asked of all of the above mentioned entities. Only the U.S. Fish & Wildlife Service responded in writing:

Question from NMED/SWQB to the U.S. Fish & Wildlife Service in a letter dated January 12, 1998:

> The questions being asked are: Does siltation, in and of itself, cause impairment to the fisheries of the lower and middle Rio Grande? Alternatively, have the native fish(es) adapted to a silty aquatic habitat, leaving other factors such as flows, nutrient loading, toxics etc., which may contribute more to the cause(s) of impairment to the fishery designated use?

Response, from Jennifer Fowler-Propst, Field Supervisor, in summation, page 5 of the letter:

> "The dilemma is that siltation is needed to provide the sandy substrate habitat required by the native fishes; and conversely, high levels of suspended sediments may be harmful to some fish and other aquatic species. There is almost no scientific information to demonstrate that concentrations of suspended sediment and amounts of siltation are harmful to New Mexico fishes; and to arbitrarily set TMDLs may not be very useful for protection of the lower and middle Rio Grande fisheries resources".

Question from NMED/SWQB to the U.S. Fish & Wildlife Service in a letter dated February 2, 1998:

> Our question, in general, is: Does siltation in-and-of itself, with all other things being equal, contribute to or directly cause impairment to the fishery use for LWWF and WWF?

Response, from Jennifer Fowler-Propst, Field Supervisor, in summation, page 2, paragraph 3, of the letter:

> "There are many intermittent streams in New Mexico including, for example, the Rio Puerco and Rio Salado. These streams are dry most of the year with the exception of high runoff events generally during the summer thunderstorms. These streams have very high suspended sediments and transport high sediment loads to the Rio Grande. The degree of siltation within intermittent streams and rivers, and its effect on limited warmwater fisheries is irrelevant, since perennial waters are required for fish survival".

1998 ACTION: Stream bottom deposits was removed as a cause of non-support and the reach was removed from the 303(d) list.

2000 ACTION: None

80. Sulphur Creek above Redondo Creek to the headwaters (WBS MRG2-40100, WQS 2106)

This reach has extreme pH violations. At two stations on this reach the exceedences ratio is 2/2 and 6/6 for pH. The cause of this is unknown but is most likely from natural causes. The exceedences

ratio for temperature is 1/6 which will be listed as Full Support, Impacts Observed. No other concerns were noted on this reach.

1998 ACTION: The reach will be listed with pH as the cause of non-support.

2000 ACTION:

pH: One sampling station was established on this reach. Monitoring at the station documented 6/7 exceedences for pH.

pH will remain listed as a cause of non-support

Conductivity: One sampling station was established on this reach. Monitoring at the station documented 3/8 exceedences for conductivity.

Conductivity will be added as a cause of non-support for this reach

Turbidity: One sampling station was established on this reach. Monitoring at the station documented 1/7 exceedences for Turbidity.

Add to the 305(b) report as FSIO.

81. Tijeras Arroyo from the mouth of Tijeras Canyon to Tijeras (WQS unclassified)

Previously listed as partially supported for metals (Cd, Hg chronic) and nutrients. In 1984, there was a sewer break at Montessa Park that flowed into lower Tijeras Arroyo and made it into the Rio Grande. There are no STORET data available, but a report from ***Potter, D.U. 1984, titled, Rio Grande Water Quality Survey (August 28-September 4, 1984) in Response to a Sewer Line Break at Tijeras Arroyo on August 25, 1984. EID/SWQ-85/2. 52 p.,*** documents the spill and 1998 Actions taken to abate the pollution.

1998 ACTION: This arroyo will be removed from the 303(d) list as fixing the sewer line solved the problem.

2000 ACTION: None

82. Redondo Creek from the mouth on Sulphur Creek to the headwaters (WBS MRG2-40100, WQS 2106)

Previously listed as partially supported for total phosphorus and fecal coliform. Data on this segment

are very limited. Ten-year data is limited to one station (USGS 355223106371710) this station has two sampling events (1996 and 1997). For total phosphorus, this station shows 0/2 samples greater than the criteria which indicates full support. For fecal coliform, there have been only two samples collected. The exceedences ratio of 1/2 will result in a listing of Full Support, Impacts Observed for fecal coliform.

1998 ACTION: Phosphorus was removed as a cause of non-support. As per the assessment protocol, the reach was upgraded to Full Support, Impacts Observed for fecal coliform and will be placed on the 305(b) list.

2000 ACTION:

Total Phosphorus: Two sampling station were established on this reach. Monitoring at the stations documented 7/10 exceedences for total phosphorus.

A TMDL was developed for Redondo Creek to address total phosphorus.

Fecal Coliform: Fecal coliform was removed from the 1998-2000 303(d) list but remained listed in the 1998 305(b) Report as full support, impacts observed (FSIO).

Add to the 305(b) report as FSIO.

Turbidity: One sampling station was established on this reach. Monitoring at the station documented 2/7 exceedences for turbidity.

A new listing will be added for turbidity at the lower sampling station

Temperature: One thermograph was deployed on this reach. The thermograph was deployed above the confluence with Sulphur Creek. The thermograph exceeded the HQCWF criterion 82/1,796 times with a maximum temperature of 24°C. This site exceeded the draft Temperature Protocol for a one-time maximum temperature (23°C).

A new listing will be added for temperature

83. San Antonio Creek from the confluence with the East Fork of the Jemez River to the headwaters - (WBS MRG2-40000, WQS 2106)

Previously listed for total phosphorus, temperature, turbidity, chlorine, stream bottom deposits and fecal coliform. There are two stations on this reach which were last sampled in 1987. For turbidity,

the ratio of exceedences at the two stations was 0/11 or full support. The total phosphorus ratio at station MRG106.010010 is 2/12 (17%) or partially supported and 1/6 or Full Support, Impacts Observed at station MRG106.100001. The exceedence ratio for temperature at station MRG106.010010 was 3/12 or partially supported and 0/6 or full support at station MRG106.100001. Fecal coliform data are available at station MRG106.010010 only. Two samples were collected in 1987 both of which were well under the criteria. Fecal coliform is full support for this reach. 1/1 sample for chlorine at station MRG106.010010 was above the criteria. As per the assessment, the reach is Full Support, Impacts Observed for chlorine.

1998 ACTION: Turbidity, chlorine and fecal coliform were removed from the list as causes of non-support. Phosphorus, temperature and stream bottom deposits were retained as causes of non-support.

2000 ACTION:

Temperature: Two thermograph sites were established on this reach. The SA Creek@Battleship Rock Picnic Areas site had an exceedence ratio of 84/1,797 with a maximum temperature of 22.5°C. This site exceeded the Temperature Protocol for hours of exceedence duration > 6 hours. The SA Creek above SA Campground site had an exceedence ratio of 117/1,795 with a maximum temperature of 24.5°C. The site exceeded the Temperature Protocol maximum 1-time exceedence of 23°C.

Temperature will be retained as a cause of non-support

Total Phosphorus: Two sampling stations on this reach had a combined exceedence ratio of 0/15 for total phosphorus.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for total phosphorus on San Antonio Creek.

Stream Bottom Deposits: San Antonio Creek is characterized by two stations. The upper station is a C4 type stream. The % fines <2mm is 12% and the mean embeddedness was 44% making it a good bottom substrate. The second station is located above the confluence with the East Fork of the Jemez River. The % fines at this station was 5%. This is assessed as being an excellent substrate.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for stream bottom deposits on San Antonio Creek.

Total Organic Carbon (TOC): There is an abbreviated data set for this parameter that shows both stations with a 1/3 exceedence ratio of the criterion. Additional analyses will be collected.

Add to the 305(b) report as FSIO.

Turbidity: Two sample stations were established on this reach. The station at Battleship Rock was 3/7 for turbidity exceedences. The station at SA Campground was also 3/7 exceedences for turbidity.

A new listing will be added for turbidity

84. East Fork of the Jemez River from the confluence with San Antonio Creek to the headwaters (WBS MRG2-30000, WQS 2106)

Previously listed for nutrients, chlorine, and stream bottom deposits. There are two stations on this reach which were last sampled in 1987. For nutrients, no exceedences were found and is at full support. For chlorine, station MRG106.011001 had an exceedence ratio of 1/1, full support, impacts observed.

1998 ACTION: Nutrients will be dropped from the list while chlorine will be added to the 305(b) report as full support, impacts observed. Stream bottom deposits were retained as causes of non-support.

2000 ACTION:

Stream Bottom Deposits: The East Fork is characterized by a station located above the confluence with San Antonio Creek. Classified as a C4 stream, this station has a % fines <2mm of under 2%. This segment is assessed as having excellent stream bottom substrate.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for stream bottom deposits on the East Fork of the Jemez River.

Turbidity: The exceedence ratio on this reach for turbidity was 2/7.

A new listing will be added for turbidity

Total Organic Carbon (TOC): There is an abbreviated data set for this parameter that shows both stations with a 1/3 exceedence ratio of the criterion. Additional analyses will be collected.

Add to the 305(b) report as FSIO.

85. Jemez River from Rio Guadalupe to the confluence of the East Fork of the Jemez River and San Antonio Creek (WBS MRG2-20000, WQS 2105.5 and 2106)

Listed for turbidity, conductivity, plant nutrients, stream bottom deposits and chlorine. Data from four stations were used in the turbidity assessment. Station MRG105.009035 (3/6) was determined to be partially supported. All other stations were full support with 0/12 exceedences. Data for conductivity were available from only two stations. Station MRG106.009505 was partially supported with a 2/5 ratio. Station MRG106.009510 was 0/11 or full support for conductivity. Per the assessment protocol, two stations, MRG105.009035 and MRG105.009510, were 1/1 or Full Support, Impacts Observed for chlorine.

1998 ACTION: Chlorine was removed a cause of non-support. Turbidity, conductivity, plant nutrients and stream bottom deposits were retained as causes of non-support.

2000 ACTION:

Turbidity: Four sampling stations on this reach have an exceedence ratio of 3/7, 6/10, /2/7 and 3/4 respectively.

A TMDL was developed for the Jemez River to address turbidity.

Plant Nutrients: Field assessments were conducted using the draft Nutrient Assessment Protocol and draft Source Documentation Protocol. Since there is no numeric standard for plant nutrients in New Mexico, the narrative standard for plant nutrients is evaluated using this protocol. No plant nutrient impairments were found along this reach. There were no exceedences of nutrient related criteria such as total phosphorus, nitrogen, pH and dissolved oxygen during any sampling season. As well, there were no observations of nutrient over-enrichment noted on field sheets during any sampling season. In addition, there was a biological assessment conducted on Jemez River in November of 1998. The Hilsenhoff Biotic Index (HBI) which is used as an indicator of nutrient enrichment showed a calculated value of 4.84. This number falls in the HBI range of 4.51-5.50

meaning water quality is good with some organic pollution present.

Water quality standards, as assessed using the 1998 Assessment Protocol and 1999 draft Nutrient Assessment Protocol are currently being met for plant nutrients on the Jemez River.

Stream Bottom Deposits: There is one station on this reach which was used to characterize the Jemez River. This reach of the Jemez River is a Rosgen C3 stream type with a % fines <2mm of 26% indicating a moderate level of impairment.

A TMDL was developed for the Jemez River to address stream bottom deposits.

Conductivity: Four stations on this segment have exceedence ratios of 0/7, 0/10, 0/7 and 0/4 for conductivity.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for conductivity on the Jemez River.

Metals (Al Acute): One metals station on this reach provided an exceedence of the aluminum criterion with a 4-day average of 947ug/l. Of these four samples, two exceeded the acute criterion for aluminum.

A new listing will be added for metals (Al acute)

86. Jemez River from the Rio Grande to the confluence with the Rio Guadalupe - (WBS MRG2-10000, WQS 2105)

Previously listed for metals (As) and fecal coliform. In the aggregated 10 year data set for arsenic at three stations, the ratio of exceedences to samples is 0/20. Additional data from the recently completed USGS study of the middle Rio Grande also support this change to full support. For fecal coliform, the data set is limited. Ratios for three stations are 1/2, 0/3, and 0/2. Station MRG105.006050 will be listed as Full Support, Impacts Observed while stations MRG105.006010 and MRG105.007015 will be changed to full support.

1998 ACTION: Arsenic was removed as a cause of non-support. Per the assessment protocol, the reach was removed from the 303(d) list and will be listed on the 305(b) list as Full Support, Impacts Observed for fecal coliform.

87. Rio Cebolla from the confluence with the Rio de las Vacas to Fenton Lake - (WBS

MRG2-20300, WBS 2106)

Previously listed for pH, stream bottom deposits and total ammonia. The listing for pH is supported as 3/5 pH samples collected in a 1989 survey were outside the allowable range. This reach will be listed as not supported for pH. For total ammonia, 0/5 samples collected as part of the same survey exceeded the chronic criteria. This segment is fully supporting for total ammonia.

1998 ACTION: Ammonia was removed as a cause of non-support. Stream bottom deposits and pH were retained as causes of non-support.

2000 ACTION:

Stream Bottom Deposits: This E4b stream is characterized by a single station above the confluence with the Rio de las Vacas. The % fines >2mm is 28% and the mean embeddedness is 53%. This would suggest a moderately impaired stream.

Stream bottom deposits will remain on the list as a cause on non-support

pH: There was an exceedence ratio of 0/7 for pH.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for pH on this reach of the Rio Cebolla.

88. Rio Cebolla from inflow to Fenton Lake to the headwaters (WBS MGR2-20400, WQS 2106)

Previously listed for temperature, stream bottom deposits and total phosphorus. For temperature, two of three stations have an exceedences ratio of 1/5. The other station has a ratio of 0/5. These stations will be given a Full Support, Impacts Observed. For total phosphorus, the ranking is based on station ratios of 0/6, 0/5, and 1/5. Station MRG106.008045 will be given a Full Support, Impacts Observed while the others are listed as full support.

1998 ACTION: Temperature and phosphorus were removed as causes of non-support. Stream bottom deposits were retained as a cause of non-support.

2000 ACTION:

Temperature: One thermograph was deployed on this reach. The thermograph was deployed above the Seven Springs Campground. The thermograph exceeded the HQCWF criterion 54/1,587 times with a maximum temperature of 22.5°C. This site exceeded the

Temperature Protocol for hours of exceedence duration > 4hours, but no more than six hours in a 24-hour cycle, and for no more than three consecutive days.

Temperature will be added as a cause of non-support for this reach of the Rio Cebolla

Stream Bottom Deposits: This stream is classified and an F5 stream type. The % fines <2mm is 42% and the mean embeddedness is 75%. This is a severely impacted stream substrate.

Stream bottom deposits will remain on the list as a cause on non-support

89. Calaveras Creek from the confluence with the Rio Cebolla to the headwaters, (WQS, 2106)

2000 ACTION:

Stream Bottom Deposits: From the point that the road intercepts the stream, the stream is 100% embedded with silt runoff from the road and associated drainage ditches.

Stream bottom deposits will be listed as a cause of non-support for Calaveras Creek

90. Rio de las Vacas from the confluence with the Rio Cebolla to the Rito de las Palomas - (WBS MRG2-20200, WQS 2106)

Previously listed for temperature, stream bottom deposits and total ammonia. For total ammonia, 0/9 samples from two stations collected in 1989 exceeded the criteria. Temperature exceedences (3/5) were reported at station MRG106.008535. This reach is not supported for temperature. Station MRG106.008515 was full support for temperature.

1998 ACTION: Ammonia was removed as a cause of non-support. Temperature and stream bottom deposits were retained as causes of non-support.

2000 ACTION:

Temperature: Three thermographs were deployed on this reach. The upper thermograph was deployed above the Rio de las Vacas Campground and had an exceedence ration of 3/1,792 with a maximum temperature if 21.0°C. This reach is in accordance with the Temperature Protocol.

The middle thermograph exceedence ratio was 375/1,793 with a maximum temperature of 27°C. This reach is not in accordance with the Temperature Protocol. The lower thermograph was deployed above the confluence with the Rio Cebolla. The exceedence ratio at this site was 218/1,795 with a maximum temperature of 24.5°C. This reach is not in accordance with the Temperature Protocol.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for temperature on the upper reach of the Rio de las Vacas.

Temperature will remain listed as a cause of non-support for the lower site
A temperature TMDL was written for the middle site.

Stream Bottom Deposits: Three stations characterized this reach. At the upper station, this stream is classified as a C3 stream type with a % fines of 6 and a mean embeddedness of 42%. Station 2 located above the Girl Scout Camp is classified as a C4 stream type with a % fines of 16 and an embeddedness value of 38. Station 3 located above the confluence with the Rio Cebolla is a B3 stream type with a % fines of <2mm of 12 and an embeddedness value of 32%. This classifies as good stream bottom substrate.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for stream bottom deposits on this reach.

Total Organic Carbon (TOC): There are three water quality monitoring stations on this reach. The exceedence ratios for TOC were 4/8, 3/7 and 4/7.

TOC will be added to this reach a cause of non-support for this reach

91. Clear Creek from the confluence with the Rio de las Vacas to the headwaters (WQS, 2106)

2000 ACTION:

Total Organic Carbon (TOC): One sampling station was established on this reach. Monitoring at the station documented

11/11 exceedences for TOC.

TOC will be listed as a cause of non-support for Clear Creek

Turbidity: One sampling station was established on this reach. Monitoring at the station documented 3/7 exceedences for turbidity.

Turbidity will be listed as a cause of non-support for Clear Creek

92. Rito Peñas Negras from the mouth on the Rio de las Vacas to the headwaters (WBS MRG2-20230, WQS 2106)

Previously listed for temperature, turbidity and stream bottom deposits. There are no data, historical or otherwise, for this reach. Data collection began in Spring of 1998 on this reach under existing 104(b)(3) and 319(h) grant monies.

1998 ACTION: This reach will continue to be listed as partially supporting for temperature, turbidity and stream bottom deposits.

2000 ACTION:

Stream Bottom Deposits: This site on the lower RPN is an E4 stream type with a % fines <2mm of 27% and a mean embeddedness of 58%. This would suggest a moderately impaired stream substrate.

Stream bottom deposits will be retained as a cause of non-support.

Temperature: Three thermographs were deployed on this reach. The upper thermograph was deployed just below Pipeline Road and had an exceedence ratio of 9/1,847 with a maximum temperature if 21.5°C. This reach is in accordance with the Temperature Protocol. The middle thermograph exceedence ratio was 80/1,791 with a maximum temperature of 24°C. This reach is not in accordance with the Temperature Protocol. The lower thermograph had an exceedence ratio of 117/1,793 with a maximum temperature of 23.5°C. This reach is not in accordance with the Temperature Protocol.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being

met for temperature on the upper reach of the Rito Penas Negras.

Temperature will remain listed as a cause of non-support for the middle and lower sites

Turbidity: Turbidity at this station had an exceedence ratio of 0/7 samples.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for turbidity on the Rito Penas Negras.

Total Organic Carbon(TOC): The ratio of exceedences for TOC on this reach is 3/7.

TOC will be added as a cause of non-support for this reach

93. Rio Guadalupe from the mouth on the Jemez River to the confluence with the Rio de las Vacas and Rio Cebolla (WBS MRG2-20100, WQS 2106)

Previously listed for conductivity, turbidity, stream bottom deposits and fecal coliform. Two stations from a 1987 survey were used in the assessment for conductivity. Station 08323000 was 1/1 for conductivity exceedences making it Full Support, Impacts Observed. Station MRG106.007501 was 2/11 or partially supported for conductivity. Turbidity measurements are available from one station. Station MRG106.007501 is Full Support, Impacts Observed (1/6) for turbidity. Fecal coliform data are also available from one station. Station MRG106.007501 has a 1/2 ratio of exceedences. Per the assessment protocol, this reach is Full Support, Impacts Observed for fecal coliform and turbidity.

1998 ACTION: Turbidity and fecal coliform were removed as causes of non-support. Conductivity and stream bottom deposits were retained as causes of non-support.

2000 ACTION:

Conductivity: Exceedence ratios for conductivity on this reach were 1/7. As per the Assessment Protocol, the exceedence percentage of 14 indicates a fully supporting reach.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for conductivity on the Rio Guadalupe.

Turbidity: Turbidity exceedences at the station just above the confluence with the Jemez River had a ratio of 2/7. On the same days as the high turbidity at this station, turbidity measurements were taken just below the Gillman Tunnels. Turbidity here was well below the criterion at 14 NTU. As a result, turbidity will

be listed as a cause of non-support from the confluence with the Jemez River up to the box.

A TMDL was developed for the Rio Guadalupe to address turbidity.

Stream Bottom Deposits: This stream is typified by two stations. The station Rio de las Vacas above the Rio Cebolla, a Rosgen B3c stream type with a % fines <2mm of 11%, is typical of the stream in the upper box area. Below the Gillman Tunnels, the stream leaves the hard rock canyon to a sandstone environment. A cross section below this developed area and above the confluence with the Jemez River is a Rosgen B4c stream type with a % fines <2mm of 28% indicating a moderate level of impairment.

A TMDL was developed for the Rio Guadalupe to address stream bottom deposits from the Gillman Tunnels down to the confluence with the Jemez River only.

Fecal Coliform: Fecal coliform was removed from the 1998-2000 303(d) list but remained listed in the 1998 305(b) Report as full support, impacts observed (FSIO).

Add to the 305(b) report as FSIO.

Total Phosphorus: The exceedence ratio of TP for this reach was 2/6. Both exceedences were linked to higher sediment loads from this reach.

The Nutrient Assessment Protocol indicates no impairment due to nutrient loading loading on this reach.

Metals (Al chronic): The 4-day average concentration at this site was 262ug/l. There were no exceedences of the acute criterion for aluminum on this reach.

Aluminum (chronic) will be added to this reach as a cause of non-support

94. American Creek from the mouth on the Rito de las Palomas to the headwaters (WBS MRG2-20241, WQS 2106)

Previously listed for temperature, stream bottom deposits and turbidity. No associated

physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with temperature, stream bottom deposits and turbidity as the cause of non-support.

2000 ACTION: None

95. Paliza Creek from Paliza Campground to the headwaters – (WQS 2105.5)

2000 ACTION:

Temperature: One thermograph was deployed on this reach. The thermograph was deployed at Paliza Campground. The thermograph exceeded the HQCWF criterion 38/1,797 times with a maximum temperature of 21.5°C. This site exceeded the Temperature Protocol for hours of exceedence duration > 6 hours (7/21/98).

Temperature will be listed on this reach as a cause of non-support

96. Vallecito Creek from the eastern Jemez Pueblo boundary to the Village of Ponderosa - (WBS MRG2-10200, WQS 2105.5)

Previously listed for temperature, total ammonia, pH, stream bottom deposits and fecal coliform. 2/11 (18%) of the samples from surveys conducted in 1986-1987 were above the criteria for temperature. This listing will remain with a partially supporting status. For total ammonia 1/11 samples were above the chronic criteria value. This listing for nonsupport will be changed to Full Support, Impacts Observed. For pH, 6/11 samples were above the criteria. The not supporting listing for pH will remain. For fecal coliform, 1/1 samples exceeded the criteria. Per the assessment protocol, fecal coliform and ammonia are Full Support, Impacts Observed.

1998 ACTION: Fecal coliform and ammonia were removed as a cause of non-support. Temperature, stream bottom deposits and pH were retained as causes of non-support.

2000 ACTION:

Temperature: The exceedence ratio for temperature on this reach was 3/7.

Temperature will continue to be listed as a cause of non-support on this reach

pH: The exceedence ratio for pH on this reach was 0/7.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for pH on Vallecitos Creek.

Turbidity: The exceedence ratio for temperature on this reach was 5/7.

Turbidity will be added as a cause of non-support on this reach

Stream Bottom Deposits: Steam bottom deposits will continue to be listed as a cause of non-support on this reach.

97. San Pablo Creek from the mouth on the Rio Puerco to the headwaters (WBS MRG4-20050, WQS 2107)

Previously listed for turbidity, plant nutrients and stream bottom deposits. There is only one data point in the STORET data base for turbidity on this reach. A ratio of 1/1 will be listed as Full Support, Impacts Observed until additional information can be collected for a more complete assessment.

1998 ACTION: Per the assessment protocol, turbidity was removed as a cause of non-support. Plant nutrients and stream bottom deposits were retained as causes of non-support.

2000 ACTION: None

98. Rito Leche, perennial portions (WBS MRG4-20110, WQS 2107)

Previously listed for stream bottom deposits, reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits as the cause of non-support.

2000 ACTION: None

99. Nacimiento Creek from USFS boundary to San Gregorio Reservoir (WBS MRG4-20100, WQS 2107)

Previously listed for stream bottom deposits, nutrients, reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits and nutrients as the cause of non-support.

2000 ACTION: None

100. Las Huertas Creek from Placitas to Capulin Canyon (WBS MRG1-10100, WQS 2108.5)

Previously listed for stream bottom deposits, reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits as the cause of non-support.

2000 ACTION: None

101. Galisteo Creek, perennial portions (Rio Grande, unclassified)

Previously listed for stream bottom deposits, reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits as the cause of non-support.

2000 ACTION: None

102. Rio San Jose from USGS gage at Correo to Horace Springs (WBS MRG7-10000, WQS 2107)

New listing for metals (Hg), temperature, dissolved oxygen, turbidity, total phosphorus, stream bottom deposits and pH. There are very limited data sets for this reach within ten years. Because of this, data from 1986 to present were used for the assessment. The mercury ratios at two stations are 0/2 and 0/1. The temperature ratio at station MRG107.002505 is 0/1, station 2510 is 2/6, and station 2515 is 3/10. Temperature will be assigned an assessment of partial support at stations 2505 and 2510 and not supporting at station 2515. Dissolved oxygen ratios at the three stations are 0/1 at station 2505, 1/6 at station 2510, and 1/10 at station 2515. Dissolved oxygen will be listed as full support at station 2505 and Full Support, Impacts Observed at stations 2510 and 2515. Turbidity data are available only at station 2515. Here the exceedence ratio was 0/9. Total phosphorus ratios are 0/1 at station 2505, 3/4 at station 2510, and 8/8 at station 2515. Station 2505 will be listed as full support and stations 2510 and 2515 will be listed as not supporting. For pH, the ratios are 0/1 at station 2505, 0/5 at station 2510, and 3/10 at station 2515. Stations 2505 and 2510 will be listed as full support for pH while station 2515 will be listed as not supporting.

1998 ACTION: Mercury, dissolved oxygen and turbidity were removed as causes of non-support. Temperature, phosphorus, pH and stream bottom deposits were retained as causes of non-support.

2000 ACTION: None

103. Rio Moquino from mouth on Rio Paguate to headwaters (WBS MRG7-10110, WQS 2107)

Previously listed for temperature and stream bottom deposits. There are no ten-year temperature data. Using 1978 to 1980 data the temperature exceedences ratio is 3/10 or not supporting for temperature.

1998 ACTION: Temperature and stream bottom deposits were retained on the list as causes of non-support.

2000 ACTION: None

LOWER RIO GRANDE

104. Rio Grande from the NM-TX border to Leesburg Dam (WBS LRG1-10000, WQS 2101)

Previously listed for total ammonia, chlorine, pH and stream bottom deposits. The data set for total ammonia includes data collected from 14 stations during sampling events in 1988, 1991, 1993, 1994, 1995, 1996, and 1997. Several stations show various levels of impacts in the data greater than five years old. For data collected within the last five years the aggregate ratio of exceedences to samples is 0/152. These data support removal of total ammonia as a cause of nonsupport. Chlorine data in STORET is very limited there are no stations with greater than one chlorine exceedence recorded. Additional data was collected in January, 1998. All values were below the field quantification levels of the instrument and only 1/53 exceeded the criteria. The reach should be listed as fully supporting chlorine. There are eleven stations with pH data. The aggregated ratio of criteria exceedences to samples for pH is 1/138. In a January 9, 1998 letter to NMED, Jim Brooks of the U.S. Fish & Wildlife Service, New Mexico Fishery Resources Office stated that "... a total maximum daily load for siltation in the middle and lower Rio Grande in New Mexico would not improve habitat conditions for the native fish fauna".

1998 ACTION: The reach will be listed for 1.7 miles of unknown toxicity.

2000 ACTION:

Rio Grande from NM-TX border to Leasburg Dam, (Rio Grande, 2101), E, Partially Supported. Removed from the list due to findings from Tetra Tech (Jerry Diamond) that unknown toxicity in this reach is not a source of impairment and a TMDL is not necessary at this time. See accompanying letter from Tetra Tech.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for unknown toxicity on the Lower Rio Grande.

105. Rio Grande from Leesburg Dam to Caballo Reservoir (WBS LRG1-20000, WQS 2101)

Previously listed for pH. There are two stations in this reach with pH data. All data are from a 1989 survey. The station designated as LRG101.000185 has an exceedence ratio of 2/5. Station LRG1.000180 has an exceedences ratio of 0/5. This reach will be listed as partially supporting for pH from station LRG101.000185 to the Caballo Reservoir dam.

1998 ACTION: The reach was retained with pH listed as the cause of non-support.

2000 ACTION:

Rio Grande from Leasburg Dam to Caballo Dam (Rio Grande, 2101, 2102), E, Partially Supported, (LRG1-20000). Removed from the list due to incorrect listing (by USGS) of a pH value of 9.3. See letter from USGS.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for pH on the Lower Rio Grande.

PECOS RIVER BASIN

UPPER PECOS

106. Pecos River from inflow to Sumner Reservoir to Cañon del Oso (WBS UPR-10000, WQS 2111)

Previously listed for metals (Al), stream bottom deposits and fecal coliform. Assessments on this river reach are made using five stations. Two are USGS stations and three are NMED SWQB stations. For aluminum, there has been one exceedences of all stations within the last five years. This was an acute (1/4) exceedence at USGS station 08382650. The assessment protocols allow one exceedence within five years to be classified as full, support impacts observed. However, there have been more (2/4) exceedences of the chronic screening criteria at this station which would classify the reach as partial support for chronic exceedences of the Al screening criteria. All other stations are fully supporting for this criteria. For fecal coliform there have been 0/14 exceedences of the criteria within the last ten years. This reach is fully supporting for fecal coliform.

1998 ACTION: Fecal coliform was removed as cause of non-support. Metals (aluminum) and stream bottom deposits were retained as causes of non-support.

2000 ACTION: None

107. Tecolote Creek from Blue Creek to headwaters (WBS UPR-20100, WQS 2212)

There were two Tecolote Creek listings in the 1996-1998 §303(d) List, Tecolote Creek from Blue Creek to the headwaters (5.6 miles) and Tecolote Creek from the Village of Tecolote to Blue Creek (20.8 miles). The uppermost reach was listed for turbidity, siltation, reduction of riparian vegetation and streambank destabilization. The lower reach was not included in the 1998-2000 §303(d) List. STORET data for this reach was assessed along with the lower reach (UPR212.004040, 0/4 exceedences for turbidity).

108. Tecolote Creek from Village of Tecolote to Blue Creek (WBS UPR-20100, WQS 2212)

Previously listed for temperature, conductivity, turbidity, stream bottom deposits and total phosphorus. Three stations were used to assess temperature. The cumulative ratio of exceedences at these three stations was 0/87. There was a SWQB survey conducted in 1987 which shows 3/5 temperature exceedences at station UPR212.004010. This reach should be listed as partially supporting for this station only. The remainder of the reach is full support. Intensive survey information for conductivity was collected between 1988 and 1992 at several USGS stations. At station 08379187 0/347 samples exceeded the conductivity criteria of 300 □mhos. Again at station UPR212.004010 3/5 samples exceeded the conductivity criteria. This station should be listed as

partially supporting for conductivity all others are full support.

Turbidity is another parameter for which there is extensive information. At USGS station 08379187 turbidity information was collected intensively over a day approximately every two months from 1988 to 1992. During this period 22/52 samples at this station exceeded the turbidity criteria. At USGS station 08379175, similar sampling was conducted. Here only 1/28 samples exceeded the criteria. At USGS station 08389178 only 1/11 samples exceeded the criteria. During a 1987 SWQB survey turbidity at stations UPR212.004020 and 4010 were 2/5 and 4/5 respectively. Therefore, station 08379187 is not supporting for turbidity, and stations UPR212.004020 and 4010 are partially supporting for turbidity. Total phosphorus should be listed as Full Support, Impacts Observed at stations 08379187 and 08379178 and fully supporting at all other stations.

1998 ACTION: **This 1998 ACTION is for both reaches 107 and 108.** Phosphorus was removed from the list as a cause of non-support. Temperature, conductivity, turbidity and stream bottom deposits were retained as causes of non-support. **Combine and rename this reach Tecolote Creek from the Village of Tecolote to the headwaters 26.4 miles affected.**

2000 ACTION: None

109. Wright Canyon from the mouth on Tecolote Creek to Forest Road 291 (WBS UPR-20150, WQS 2212)

Previously listed for turbidity and total phosphorus. Data for turbidity comes from two USGS stations 08379185 and 08379182. Both of these stations, 8/31 and 33/107 respectively, indicate the fishery use is not supported. For total phosphorus, these stations have ratios of 1/23 and 3/22 respectively. Both stations are fully supporting for total phosphorus (1/23 and 3/22).

1998 ACTION: Total phosphorus was removed as a cause of non-support. Turbidity and stream bottom deposits were retained on the list as causes of non-support.

2000 ACTION: None

110. Gallinas River from the diversion for Las Vegas reservoir to headwaters (WBS UPR-10300, WQS 2212)

Previously listed for turbidity, stream bottom deposits and temperature. Turbidity information is available from three stations. Station 08380000 has an exceedences ratio of 2/11 while stations 08379940 and UPR212.002530 are 0/18 and 0/3 respectively. The listing for turbidity should be partially supported at station 08380000 and full support at the other two stations. Temperature data are available from six stations. SWQB station HP32 the exceedences ratio is 2/23 for a Full Support, Impacts Observed assessment. At station 08380500, the ratio is 3/18 or partially supported. All other stations are full support. Aluminum should be added to the listing due to acute exceedences 3/17 at

station HP32 during the last 5 years. This station is not supported for acute aluminum exceedences. Station UPR212.002530 also has shown one exceedence in the past five years and should be listed as Full Support, Impacts Observed. Three stations were selected for biological assessments on the Gallinas River above the diversion in 1993. The upper most station was selected as the reference site for this survey. The next down stream site was located just above the confluence with Porvenir Creek was FS (96%). The next down stream site at the USGS gage near the diversion was Full Support, Impacts Observed (75%). The cited cause of reduced biological community at the lower site was impacts from sediment in the river.

1998 ACTION: Turbidity, stream bottom deposits and temperature were retained as causes of non-support. Aluminum was added as a cause of non-support.

2000 ACTION: None

111. Gallinas River from San Augustin to the diversion for the Las Vegas municipal reservoir (WBS UPR-10200, WQS 2213)

Previously listed for unknown toxicity, dissolved oxygen, turbidity, total ammonia, stream bottom deposits and temperature. Intensive surveys were conducted by the SWQB in 1990 and 1993. The listing for unknown toxicity is from toxicity testing conducted at stations near the WWTP in Las Vegas during the 1990 survey. Toxicity was noted in waters immediately upstream from the WWTP and in the effluent itself. This listing is valid in a distance from above the WWTP to the first station below the WWTP. Dissolved oxygen data are available from seven stations along this reach. All stations are full support for dissolved oxygen (1/60). The turbidity listing is erroneous because there is no turbidity standard for this segment. Total ammonia data show 15/15 exceedences at station UPR211.001525 which is immediately downstream from the Las Vegas WWTP. No exceedences are recorded at other stations above and below this station. This station should be listed as not supported for total ammonia. Temperature information is available from both surveys. The cumulative temperature exceedences for both surveys was 0/123. This entire reach should be upgraded to full support for temperature. An additional listing will be made for biological assessment based on information from the 1993 survey. All stations from the biological assessment were full support with the exception of station UPR211.001525 which is the station immediately downstream from the WWTP. This station was 42% of the reference condition with a nutrient enrichment index (Hilsenhoff Biotic Index) of 7.24 which places it as fairly poor with significant organic pollution present.

1998 ACTION: Dissolved oxygen, turbidity and temperature were removed as causes of non-support. Unknown toxicity, ammonia and stream bottom deposits were retained as causes of non-support.

2000 ACTION: None

112. Beaver Canyon Creek from the mouth on Porvenir Creek to the headwaters (WBS PR1-10311, WQS 2214)

Previously listed as Beaver Creek for stream bottom deposits, reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits as the cause of non-support.

2000 ACTION: None

113. Porvenir Creek from the mouth on the Gallinas River to the USFS Campground (WBS UPR1-10310, WQS 2212)

Previously listed for turbidity, stream bottom deposits and temperature. Turbidity data are available from one station. Station UPR212.002520 which shows exceedences of 14/33. This reach should be listed as not supported for turbidity. The temperature data are from two stations. The cumulative ten year exceedences ratio for both stations is 0/42. Temperature will be upgraded to full support. A biological assessment was conducted on Porvenir creek in 1993. The biological assessment was found to be FS (81%). In addition to the NMED biological data the USGS conducted intensive surveys for physical/chemical and biological data which is published in "Water Quality and Benthic Macroinvertebrate Bioassessment of Gallinas Creek, San Miguel County, New Mexico, 1987-90" (Water-Resources Investigations Report 96-4011). In this survey 6 separate assessment events were conducted over a 4 year period. The procedure used was equivalent to rapid bioassessment protocol III. The Porvenir Creek results in the seasonal surveys were 90, 95, 100, 90, 95, and 100% of the reference site. The report also states, "Turbidities were 10 or more units during runoff events at all sites except site 1 (the references site, watershed size 4.6 square miles). Turbidities at site 3 (Porvenir Creek) exceeding this water-quality standard are most probably due to natural causes". Descriptions within parentheses have been added for reference. Of 18 data points, the highest turbidity reported was 25 NTU during a runoff event. The weight of evidence is in support of removal of the turbidity listing.

1998 ACTION: The reach was removed from the 303(d) list.

2000 ACTION: None

114. Pecos River from Cañon del Oso to Alamitos Canyon (WBS UPR1-20000, WQS 2213)

Previously listed for stream bottom deposits, nutrients, reduction of riparian vegetation and streambank destabilization. A 1991 intensive survey found nutrients were not impairing the fishery use.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits as the

cause of non-support.

2000 ACTION: None

115. Pecos River from Alamitos Canyon to Willow Creek (WBS UPR1-30000, WQS 2214)

Previously listed for turbidity and metals (Zn, Pb, and Al). Turbidity data from three stations show exceedence ratios of 1/12 at UPR214.006020, 3/18 at station CON08, and 3/19 at UPR080. This reach should have a listing of partially supported for turbidity. For chronic aluminum ratios at the three stations are 5/12, 5/10, and 4/9. This reach should be listed as not supported for chronic aluminum. For chronic lead, the ratios at four stations are 0/12, 0/2, 0/10, and 0/9 with all values reported as <5 ug/l. Lead should be removed as a cause of nonsupport for this reach. Dissolved zinc data shows several exceedences of the acute criteria. Stations UPR080 has a ratio of 5/10 and UPR214.006020 has a ratio of 2/9. Station Pecos CON08 has 0/10 with all values reported as less than detection. Stations UPR080 and UPR214.006020 should be listed as not supported for zinc. However, there are pollution control requirements for metals in the decision document issued by NMED pursuant to an Administrative Order and Consent for the Terrero mine. The Surface Water Quality Bureau has reviewed the remediation document and believes that these requirements are stringent enough to implement all applicable water quality standards. The draft decision document was reviewed by EPA Region 6, (Superfund Division), and found to be acceptable. Because of these requirements, a TMDL for metals is not necessary.

1998 ACTION: Metals were removed from the 303(d) list and will be placed on the 305(b) Report as a cause of non-support. Turbidity was retained as a cause of non-support.

NOTE: ***Pursuant to 40 CFR 130.7(b)(1)(iii), a waterbody is not required to be listed if other pollution control requirements required by State or federal authority are stringent enough to implement the appropriate water quality standards for such waters. Pollution control requirements for the old Terrero Mine are stringent enough to implement metals criteria applicable to Willow Creek and the Pecos River downstream of Willow Creek. Standards are anticipated to be met within the next two years.***

2000 ACTION: None

116. Willow Creek from the confluence at the Pecos River to the headwaters (WBS UPR1-30500, WQS 2214)

Originally listed as two segments. One segment was listed as the Terrero Mine drainage and the other listing was for the stream above the mine. These listings were combined into one listing with limitations on the affected mileage. The combined listings were metals (Cu, Zn, Cd, and Hg), conductivity, turbidity and stream bottom deposits. The turbidity listing of not supported appears to be valid for the entire reach. Exceedences ratios at three stations are 4/15, 8/12, and 5/17. The

mercury listing should be upgraded to full support. The exceedence ratios for three stations are 0/10, 0/10, and 0/10. For copper, the listing is supported at station UPR214.00710 with an exceedences ratio of 8/10 for the chronic criteria. Two other stations UPR214.00716 and PECOSCON07 have exceedence ratios of 0/10. Cadmium follows the same pattern as copper. Station UPR214.00710 has 9/10 samples exceeding the acute criteria with stations UPR214.00716 and PECOSCON07 both with 0/10 ratios. Zinc has exceedence ratios of 9/10 and 3/15 (not supported) at stations UPR214.00710 and PECOSCON07 respectively. Station UPR214.007016 is full support. However, there are pollution control requirements for metals in the decision document issued by NMED pursuant to an Administrative Order and Consent for the Terrero mine. The Surface Water Quality Bureau has reviewed the remediation document and believes that these requirements are stringent enough to implement all applicable water quality standards. The draft decision document was reviewed by EPA Region 6, (Superfund Division), and found to be acceptable. Because of these requirements, a TMDL for metals is not necessary. All three stations show high ratios of exceedences for conductivity. These ratios 8/18, 14/14, and 10/12 at stations 7016, 7010, and PECOSCON07 respectively are not supported for conductivity.

1998 ACTION: Metals were removed from the 303(d) list and will be placed on the 305(b) list as a cause of non-support. Turbidity, conductivity and stream bottom deposits were retained as a cause of non-support.

NOTE: ***Pursuant to 40 CFR 130.7(b)(1)(iii), a waterbody is not required to be listed if other pollution control requirements required by State or federal authority are stringent enough to implement the appropriate water quality standards for such waters. Pollution control requirements for the old Terrero Mine are stringent enough to implement metals criteria applicable to Willow Creek and the Pecos River downstream of Willow Creek. Standards are anticipated to be met within the next two years.***

2000 ACTION:

Pursuant to 40 CFR 130.7(b)(1)(iii), a TMDL is not required if other pollution control requirements required by State or federal authority are stringent enough to implement the appropriate water quality standards for such waters. Pollution control requirements for the old Terrero Mine are stringent enough to implement standards criteria applicable to Willow Creek and the Pecos River downstream of Willow Creek

The upper Pecos Watershed is scheduled for an intensive watershed study in 2001 which will include Willow Creek and determine if water quality standards are being met on this reach. Remediation efforts continue to be implemented under the plan cited below.

See document titled, "Final Decision Document Pecos Mine Operable Unit Upper Pecos Site Terrero, New Mexico, New Mexico Environment Department, April 9, 1998"

117. Holy Ghost Creek from mouth on the Pecos River to Doctor Creek (WBS UPR1-30400, WQS 2214)

Previously listed for metals (aluminum) and reduction of riparian vegetation. The data is from 1991 and 1992. The exceedence ratio of the 1.5 times the chronic screening criteria is 2/7. The chronic screening criteria is 130.5ug/l. The exceedences were 300ug/l and 200ug/l respectively.

1998 ACTION: The reach was retained on the 303(d) with metals (aluminum) as the cause of non-support.

2000 ACTION: None

118. Cow Creek from mouth on Pecos River to headwaters (WBS PR1-20200, WQS 2214)

Previously listed for stream bottom deposits, reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with stream bottom deposits as the cause of non-support.

2000 ACTION: None

119. Rio Mora from the mouth on the Pecos River to the headwaters (WBS UPR1-30600, WQS 2214)

1998 ACTION: Change listing description to read as above.

2000 ACTION: None

LOWER PECOS

120. Pecos River from Salt Creek to Sumner Dam (WBS PR3-10000, WQS 2207)

Previously listed for stream bottom deposits. A July 18, 1997 letter from U.S. Fish & Wildlife stated that siltation and sedimentation are not an issue for this reach of the Pecos River. Additional information is available in the report "***Record of Decision Concerning the Development of Total Maximum Daily Loads for Segments 2206 and 2207 of the Pecos River".***

1998 ACTION: The reach was removed from the 303(d) list.

2000 ACTION: None

121. Pecos River from Rio Peñasco to Salt Creek (WBS PR7-10000, WQS 2206)

Previously listed for metals (Hg), dissolved oxygen, total ammonia, total dissolved solids and stream bottom deposits. A review of historical data and an intensive seasonal survey conducted by NMED in April, July and November of 1997 produced no supporting data for listing this reach of the Pecos River. A July 18, 1997 letter from U.S. Fish & Wildlife stated that siltation and sedimentation are not an issue for this reach of the Pecos River. Additional information is available in the report "***Record of Decision Concerning the Development of Total Maximum Daily Loads for Segments 2206 and 2207 of the Pecos River".***

1998 ACTION: The reach was removed from the 303(d) list.

2000 ACTION: None

122. Pecos River from Black River to Lower Tansil Dam (WBS PR11-20000, WQS 2202)

Previously listed for metals (Al), salinity, stream bottom deposits and total ammonia. Salinity should be upgraded to full support as there have been no exceedences of total dissolved solids, sulfate and chloride criteria in the last ten years. All total ammonia data are from the five to ten year interval. The cumulative ratio of samples from three stations is 0/15. Total ammonia should be upgraded to full support. The cumulative ratio of samples from three stations for aluminum is 0/7 over the last ten years. Aluminum should be upgraded to full support.

1998 ACTION: Salinity, ammonia and aluminum were removed as causes of non-support. Stream bottom deposits was retained as a cause of non-support.

2000 ACTION: None

123. Pecos River from the NM-TX border to Black River (WBS PR11-10000, WQS 2201)

Previously listed for temperature, metals (Al), stream bottom deposits and salinity. Extensive temperature data are available from the last two years. One station, LPR201.000505, had 1/5 exceedences which will be listed as Full Support, Impacts Observed. The cumulative ratio at all other stations was 0/154. Salinity should be removed as a cause of nonsupport as there have been no exceedences of the criteria for total dissolved solids, sulfate and chloride. Aluminum was monitored at two stations. Station LPR201.000505 was 1/1, or Full Support, Impacts Observed, for exceedences of the chronic screening ratio. Station 08407500 (USGS) was 1/7 within the last five years and 3/20 for the five to ten year interval. This station is also Full Support, Impacts Observed. There is one 1991 biological assessment on this reach. One station, LPR201.000505, was not supporting at 21% of the reference site. The assessment notes that it was probably due to poor substrate.

1998 ACTION: Temperature, metals and salinity were removed as causes of non-support. Stream bottom deposits was retained and biological criteria was added to causes of non-support.

2000 ACTION: None

124. Rio Ruidoso from Seeping Springs Lakes to the Mescalero Apache Reservation (WBS PR8-50000, WQS 2209)

Previously listed for temperature, stream bottom deposits and turbidity. Temperature data are available from six stations along the reach. Stations LPR209.012035 and 12040 are Full Support, Impacts Observed with 1/4 ratios. Station RUD12 is partially supporting with a 2/12 (17%) ratio. Stations RUD4 and RUD2 are fully supporting with 1/12 and 0/12 ratios respectively. Station 08387000 is Full Support, Impacts Observed with a 2/17 (12%) ratio. Turbidity data are available from five stations. Two stations LPR209.012035 and 12040 were samples within five to ten years. Station LPR209.012035 is not supported with 4/4 samples exceeding the criteria. Station 12040 is Full Support with a 0/4 ratio. Stations RUD12, RUD4, and RUD2 are not supported with 5/12, 8/12, and 5/12 ratios. There are five biological assessment stations on this reach. The Rio Ruidoso at the reservation boundary was used as the reference site for this survey. The next down stream site in the town of Rio Ruidoso was PS with a 67% score. The next station was at the USGS gage near the race track. The score here was also 67% of the reference. The site immediately above the WWTP was FSIO with a 74% score. The site below the WWTP was PS at 58%. These scores reflect a general loss of habitat indicating only partial support of the aquatic life use. Both biological assessment stations on this reach were rated at 58% of the reference condition. This supports the listing as partially supported.

1998 ACTION: Temperature, stream bottom deposits and turbidity were retained as causes of non-support.

2000 ACTION: None

125. Rio Ruidoso from the confluence with Rio Bonito to Seeping Springs Lakes (WBS PR8-40000, WQS 2208)

Previously listed for turbidity, stream bottom deposits, plant nutrients and temperature. Turbidity should be removed from the listing as there are no numeric criteria for turbidity in a coldwater fishery. Temperature data are available from four stations on the Rio Ruidoso. The cumulative ratio of temperature exceedences for these stations is 0/64. This reach is fully supporting for temperature. Fecal coliform with a ratio of 1/5 since 1993 will be added as Full Support, Impacts Observed.

1998 ACTION: Turbidity and temperature were removed as a cause of non-support. Stream bottom deposits, and plant nutrients were retained as causes of non-support. Fecal coliform will be added to the 305(b) list as Full Support, Impacts Observed.

2000 ACTION: None

126. Rio Bonito from confluence with Rio Ruidoso to Angus Canyon (WBS PR8-20000, WQS 2208)

Previously listed for fecal coliform and stream bottom deposits. Samples collected at two stations within five years have a cumulative ratio of 0/6 exceedences. This reach is fully supporting for fecal coliform.

1998 ACTION: Fecal coliform was removed as a cause of non-support. Stream bottom deposits was retained as a cause of non-support.

2000 ACTION: None

127. Rio Peñasco, perennial portions (WBS PR10-10000, WQS 2208)

Previously listed for turbidity and stream bottom deposits. Turbidity should be removed from the listing as there are no numeric criteria for turbidity in a coldwater fishery. Five turbidity readings were collected during a 1990 survey the greatest reading was 2.0 NTU and the mean was 1.4 NTU.

1998 ACTION: Turbidity was removed as a source of non-support. Stream bottom deposits was retained as a source of non-support.

2000 ACTION: None

128. Sitting Bull Creek from its mouth at Lost Chance Canyon to Sitting Bull Springs (WQS unclassified)

1998 ACTION: The reach was listed with plant nutrients, stream bottom deposits, fecal

coliform temperature and total phosphorus listed as causes of impairment.

2000 ACTION:

Total Phosphorus: Total phosphorus will be removed as a cause of non-support due to the lack of a total phosphorus standard for the warmwater fishery use. The Nutrient Assessment Protocol will be used to assess nutrient loading on this reach.

129. Black River from mouth on the Pecos River to the headwaters - (WBS PR11-20100, WQS 2202)

Previously listed for metals (Al), reduction of riparian vegetation, streambank destabilization, unknown and salinity. There is no standard for salinity for this segment. Salinity will be removed as a cause of non-support. Two stations were sampled for aluminum. Station LPR202.001020 was 0/1 for exceedences and will be listed as full support. Station LPR202.001010 was 1/1 and will be listed as Full Support, Impacts Observed

1998 ACTION: The reach will remain on the 303(d) list with a cause of unknown. It will also be listed in the 305(b) report as Full Support, Impacts Observed for aluminum.

2000 ACTION: None

130. Rio Hondo, perennial portions up to confluence of Rio Ruidoso and Rio Bonito (WBS PR8-10000, WQS 2208)

Previously listed for fecal coliform, reduction of riparian vegetation and streambank destabilization. Two stations have been sampled for fecal coliform with in the last five years. Each station was 0/2 for fecal coliform exceedences. This reach is in full support for fecal coliform. No associated physical/chemical data are available for the reduction of riparian vegetation and streambank destabilization listings.

1998 ACTION: The reach will be listed with unknown as a cause on the 303(d) list.

2000 ACTION: None

GILA RIVER BASIN

131. Black Canyon Creek from the mouth on the East Fork Gila River to the headwaters - (WBS GRB1-20100, WQS 2503)

Previously listed for metals (Al, chronic), temperature, and total phosphorus. Limited temperature data are available but do support a listing of not supported at stations GRB503.007523 and 7525. Stations 09565, 07543, and 09563 are Full Support, Impacts Observed. For total phosphorus, 1992 data indicated Full Support, Impacts Observed (1/1 at two stations). More recent data indicated full support (0/9 at two stations). For Al, a 0/6 ratio of exceedences to samples at two sites indicates full support.

1998 ACTION: Aluminum and phosphorus were removed as causes of non-support. Temperature was retained as a cause of non-support.

2000 ACTION: None

132. Taylor Creek from the confluence with Beaver Creek to Wall Lake - (WBS GRB1-20300, WQS 2503)

Previously listed for turbidity, temperature and metals (Al, chronic). For turbidity, a 0/18 ratio of exceedences to samples within the last five years supports upgrading the nonsupport listing for turbidity to full support. Temperature data over the last the years indicates non-support (6/11 and 9/15). Aluminum data also indicates non-support (2/3 and 1/3). Biological criteria at station GRB503.007550, FSIO 68% of the reference site.

1998 ACTION: Turbidity was removed as a cause of non-support. Temperature and metals were retained as causes of non-support. Biological criteria at station GRB503.007550, FSIO 68% of the reference site will be listed in the 1998 305(b) Report.

2000 ACTION: None

133. Gila River from Mogollon Creek to the East and West Fork of the Gila River (WBS GRB1-10000, WQS 2502)

Additional data indicated turbidity (4/9) should be added to this reach for station GRB502.008055.

1998 ACTION: Turbidity was added as a cause of non-support.

2000 ACTION: None

134. East Fork of the Gila River from the confluence with West Fork to the confluence of Beaver and Taylor Creek (WBS GRB1-20000, WQS 2503)

Previously listed for metals (Al), total ammonia, pH, total phosphorus, and total organic carbon. While aluminum exceeded the chronic screening level at station GRB503.007540 (2/3), there were no acute or chronic criteria exceedences. For total ammonia, the entire reach should be upgraded to full support based on 0/24 exceedences from four stations over ten years. The pH listing should be limited to station GRB503.007547 with 2/9 exceedences within the last five years. All other stations are fully supporting for pH. The total phosphorus listing of not supporting is verified at station 7540 (5/9). Station 7541 is Full Support, Impacts Observed and all other stations are full support. Total organic carbon is not supported at station 7540, but is full support at station 7547. A biological assessment was conducted in 1996 by NMED. The biological assessment of two stations (GRB503.007540 and GRB 503.007547) found that the fishery use was fully supported (100% and 96% of reference).

1998 ACTION: Ammonia was removed as a cause of non-support. Based on the biological data pH, phosphorus and total organic carbon were removed as causes of non-support. Aluminum was retained as a cause of non-support.

2000 ACTION: None

135. Middle Fork of the Gila River from the mouth on the West Fork of the Gila River to the USFS Ranger Station (WBS GRB1-30200, WQS 2503)

Previously listed for metals (Al), temperature, turbidity, and total phosphorus. There were no exceedences of acute or chronic criteria for aluminum though the chronic screening level was exceeded one time (1/3) at station GRB503.009560, indicating Full Support, Impacts Observed. For temperature, exceedence ratios at stations 9580 (1/6) and 9575 (0/6) support changing the listings to Full Support, Impacts Observed and full support respectively. Station 9560 has an exceedences ratio of 4/9 which would make it not supporting for temperature. Turbidity is Full Support, Impacts Observed at station 9560 and full support at stations 9575 and 9580. Total phosphorus is full support at all stations with a cumulative five year ratio of 0/27 at three stations. A biological assessment was conducted in 1996 by NMED. The biological assessment of three stations (GRB503.009580, GRB503.009575 and GRB503.009560) found full support of the fishery use (100% of reference at all sites).

1998 ACTION: Based on the biological information the reach was removed from the 303(d) list. The reach will go to the 305(b) list as Full Support, Impacts Observed for aluminum.

2000 ACTION: None

136. West Fork of the Gila River from the confluence with the East Fork of the Gila River to above the Gila Cliff Dwellings (WBS GRB1-30000, WQS 2503)

Previously listed for turbidity. The turbidity listings should be downgraded to not supported based on 6/9 ratios at two stations. A biological assessment was conducted in 1996 by NMED. The assessment found full support of the fishery use (90% of reference at station GRB503.008055).

1998 ACTION: Based on the biological data, the reach was removed from the 303(d) list.

2000 ACTION: None

137. Gilita Creek from the confluence with Snow Canyon Creek to Willow Creek (WBS GRB1-30260, WQS 2503)

Previously listed for metals (Al), temperature, and total phosphorus. This reach is defined by two stations GRB503.007545 and 9587. There was one exceedence the chronic screening level for aluminum at station GRB503.007545, but no exceedences of the acute or chronic criteria, indicating Full Support, Impacts Observed. The temperature listing should be changed to full support for station 7547 (0/6) and not supported at station 9587 (2/6). Total phosphorus should be upgraded to Full Support, Impacts Observed at station 7545 and full support (0/9) at station 9587. A biological assessment was conducted in 1996 by NMED. The assessment found full support of the fishery use (100% of reference at station GRB503.007545).

1998 ACTION: Based on the biological assessment the reach was removed from the 303(d) list. The reach will be placed on the 305(b) list as Full Support, Impacts Observed for aluminum.

2000 ACTION: None

138. Willow Creek from the mouth on Gilita Creek to the headwaters (WBS GRB1-30261, WQS 2503)

Previously listed for plant nutrients. In 1992 NMED conducted an intensive survey of the upper Gila River watershed and found that nitrogen and phosphorus levels were low. During a 1996 survey, the creek was revisited and visually found to be free from excessive plant nutrients. Based on the professional judgement of NMED staff, plant nutrients are not impairing designated uses.

1998 ACTION: The reach was removed from the 303(d) list.

2000 ACTION: None

139. Canyon Creek from the mouth on the Middle Fork of the Gila to the headwaters (WBS GRB1-30240, WQS 2503)

Previously listed for plant nutrients. The phosphorus criteria was exceeded in on sample from 1992, (1/1, station GRB503.009571), indicating Full Support, Impacts Observed. Total phosphorus will be listed in the 1998 305(b) Report as FSIO.

1998 ACTION: Plant nutrients and unknown were retained as causes of non-support.

2000 ACTION: None

140. Turkey Creek from the mouth on the Gila River to the headwaters (WBS GRB1-10200, WQS 2503)

Previously listed for temperature. Data is from 1992 and 1975. The exceedence ratio was 1/1 in 1992 and 0/1 in 1975. The reach is Full Support, Impacts Observed. Turkey creek was sampled for biological assessment in 1992. It was selected as the reference site for its high quality habitat.

1998 ACTION: The reach was removed the 303(d) list. It will be added to the 305(b) list as Full Support, Impacts Observed for temperature.

2000 ACTION: None

141. Iron Creek from the mouth on the Middle Fork of the Gila River to the headwaters (WBS GRB1-30250, WQS 2503)

Previously listed for total phosphorus and temperature. Two stations, GRB503.009577 and 9578, define the assessment for this reach. For total phosphorus, these stations have exceedence ratios of 0/8 and 0/9 respectively. Total phosphorus is full supported for this reach. For temperature, the exceedence ratios are 0/6 and 0/6 within five years. This reach is full support for temperature. A 1996 biological assessment found full support of the fishery use (96% of reference at station GRB503.009577).

1998 ACTION: The reach was removed from the 303(d) list.

2000 ACTION: None

142. Sapillo Creek from the mouth on the Gila River to Lake Roberts (WBS GRB1-10300, WQS 2503)

Previously listed for nuisance algae. Three stations, GRB503.006530, 006520 and 006540 define the assessment of this reach. Total phosphorus data indicated full support (0/3, and 0/9) at stations 006520 and 006540 and Full Support, Impacts Observed (1/9) at station GRB503.006530. A 1996 biological assessment found that nutrients and nuisance algae were not a problem (Hilsenhoff Biotic Index of 4.55), but also found partial support of the fishery use (65% of reference at station GRB503.006530).

1998 ACTION: Nuisance algae were removed as causes of non-support. Biological impairment and unknown were added as causes of non-support.

2000 ACTION: None

143. Mogollon Creek, perennial portion above the USGS gage (WBS GRB1-10100, WQS 2503)

Previously listed for metals (Pb, Al) and stream bottom deposits. This reach is defined by USGS station 09430600. Aluminum at this station has a chronic screening level ratio of 5/14 making it not supporting for aluminum. At a hardness of 40 mg/l the chronic screening level was exceeded 2/16 with no exceedences of the acute level.

1998 ACTION: Aluminum, lead and stream bottom deposits were retained as causes of non-support.

2000 ACTION: None

144. Diamond Creek from the mouth on the East Fork of the Gila River to the headwaters (GRB1-20200, WQS 2503)

Previously listed for temperature and total phosphorus. Values for both parameters are limited to one sample. Because of this limited data set the listing will be changed to Full Support, Impacts Observed based on 1/1 ratios at the stations.

1998 ACTION: The reach was removed from the 303(d) list and will be listed as Full Support, Impacts Observed on the 305(b) list.

2000 ACTION: None

145. Snow Canyon Creek from the confluence with Gilita Creek to Snow Lake (WBS GRB1-30270, WQS 2503)

Previously listed for metals (Al), temperature, dissolved oxygen, total phosphorus, stream bottom deposits and turbidity. All assessments were based on single data points. Because of the limited data available this listing will be changed to Full Support, Impacts Observed for all parameters, except stream bottom deposits.

1998 ACTION: Aluminum, temperature, dissolved oxygen, total phosphorus and turbidity were removed as causes of non-support. Stream bottom deposits was retained as a cause of non-support.

2000 ACTION: None

146. Gila River from the NM-AZ border to Mangas Creek (WBS GRB2-10000, WQS 2501, 2502)

Previously listed for turbidity and stream bottom deposits. Turbidity data are from two stations both with an exceedence ratios of 2/3. This reach will be listed as not supported for turbidity.

1998 ACTION: Turbidity and stream bottom deposits were retained as causes of non-support.

2000 ACTION: None

147. Gila River from Mangus Creek to Mogollon Creek (WBS GRB2-20000, WQS 2502)

Previously listed for turbidity and stream bottom deposits. There are again very limited data on this reach. There is one station which has been monitored only once in 1992. An exceedence ratio of 3/3 for turbidity will result in a listing of not supported.

1998 ACTION: Stream bottom deposits and turbidity were retained as causes of non-support.

2000 ACTION: None

148. Mangas Creek from the mouth on the Gila River to Mangas Springs (GRB2-20100, WQS 2502)

Previously listed for turbidity, stream bottom deposits and plant nutrients. Limited turbidity data 1/3 will result in a change in the listing to Full Support, Impacts Observed for turbidity.

1998 ACTION: Turbidity was removed as a cause of non-support. Stream bottom deposits and plant nutrients were retained as causes of non-support.

2000 ACTION: None

149. Bear Creek from the mouth on the Gila River to the headwaters (WBS GRB2-20200, WQS 2502)

Previously listed for metals (Al, Cu, and Zn). There are no dissolved metals data available for this reach.

1998 ACTION: Aluminum, copper and zinc were retained as causes of non-support.

2000 ACTION: None

150. Carlisle Creek, perennial portions in New Mexico (WBS GRB2-10010, WQS 2501)

Previously listed for metals (Al, Cu, Zn, Cd). There are no metals data, historical or otherwise, to support this listing.

1998 ACTION: Aluminum, cadmium, copper and zinc were retained as causes of non-support.

2000 ACTION: None

SAN FRANCISCO RIVER BASIN

151. San Francisco River from the AZ-NM Border to Whitewater Creek (WBS SFR4-10000, WQS 2601)

Previously listed as two segments (Dry Creek to Whitewater Creek and Border to Dry Creek) this reach should be combined to read as described above. Previously listed for stream bottom deposits and nutrients this reach should have an additional listing of Full Support, Impacts Observed for aluminum (chronic). This listing is because of 1/2 exceedences of the chronic toxic screening criteria for aluminum in the past 5 years. There are two (1992 and 1996) biological assessments on this reach at one station. The 1996 biological assessment showed the reach FS (81%) of the reference while the 1992 biological assessment was FSIO (72%) of the reference.

1998 ACTION: The reach was removed from the 303(d) list.

2000 ACTION: None

152. San Francisco River from Whitewater Creek to Largo Canyon (WBS SFR4-20000, WQS 2601)

Previously listed for metals (Al) and stream bottom deposits. There are two sampling stations used to assess this reach. The ratio of exceedences to samples for chronic aluminum is 0/4. This reach is Fully Supporting for Aluminum. There is one 1996 biological assessment on this reach at two stations. The biological assessment showed the reach FS (90% and 84%) of the reference.

1998 ACTION: The reach was removed from the 303(d) list.

2000 ACTION:

Metals: Three monitoring sites were located on the San Francisco River Segment 2301. They include: SFR at the Glenwood Gage; and SFR below Reserve. Based on data gathered during the 1998-99 survey each site was monitored a total of seven times. Due to contamination detected in a one set of QA samples, metals data collected on 6/3/98 was eliminated. Otherwise, no exceedences were documented (0/18 exceedences for the segment).
SFR at the Glenwood 0/6 exceedances
SFR at Pueblo Creek 0/6 exceedances
SFR Below Reserve 0/6 exceedances

Stream Bottom Deposits: Two monitoring sites were located on the San Francisco River Segment 2301. They include: SFR at the Glenwood Gage; and SFR below Reserve. Based on data gathered during the 1998-99 survey and attainment matrix Tables 2 & 4 contained within the Draft Protocol for the Assessment of Stream Bottom Deposits, this reach ranks Not Supporting below the town of Reserve and Full Support Impacts Observed below the town of Glenwood. Scores were as follows:
SFR at the Glenwood Gage 78% bio, 61.3 emb, and 38% fines (Table 4 FSIO).
SFR Below Reserve 61% bio.; 82.3emb.; and 50% fines (Table 4 NS)

Stream bottom deposits will be added as a cause of non-support

153. Whitewater Creek from the mouth on the San Francisco River to Whitewater Campground (WBS SFR4-20100, WQS 2603)

Previously listed for metals (Al), turbidity, stream bottom deposits and fecal coliform. There is one sampling station on this reach. The data support the turbidity and metals listings. For fecal coliform, 0/4 samples collected in the past ten years exceed the designated criteria. This reach is fully supporting for fecal coliform.

1998 ACTION: Fecal coliform was removed as a cause of non-support. Aluminum, turbidity, and stream bottom deposits were retained as causes of non-support.

2000 ACTION:

Metals (Al chronic): Two sampling sites were located on Whitewater Creek. (Whitewater Creek at the Catwalk and Whitewater Creek at Glenwood). The 1998-99 survey documented a 28.5 % exceedence (2/7) for Aluminum (NS Chronic Toxicity Level) at the Catwalk Site and a 14.3% exceedence (1/7) for Zinc (FSIO Acute Toxicity Level) at the Glenwood site.

Metals (Al chronic) will be retained as a cause of non-support

Metals (Zn acute): Two sampling sites were located on Whitewater Creek. (Whitewater Creek at the Catwalk and Whitewater Creek at Glenwood). The 1998-99 survey documented a 14.3% exceedence (1/7) for Zinc (FSIO Acute Toxicity Level) at the Glenwood site.

Add metals (Zn acute) to the 305(b) report as FSIO.

Stream Bottom Deposits: Two sampling sites were located on Whitewater Creek. (Whitewater Creek at the Catwalk and Whitewater Creek at Glenwood). Whitewater Creek at the Catwalk was ranked as Fully Supporting based on the "Combined Biological Integrity and Condition of Aquatic Habitat Attainment Matrix", (Table 4) in the Draft Protocol for the Assessment of Stream Bottom Deposits. Scores were as follows: 77% bio, 37.3% emb, and 5.4% fines. Whitewater Creek at Glenwood was ranked as not supporting based on the same criteria. Its score were as follows: 68% bio, 69.5% emb, and 44% fines.

Stream bottom deposits will retained as a cause of non-support

Turbidity: Two sampling sites were located on Whitewater Creek. (Whitewater Creek at the Catwalk and Whitewater Creek at Glenwood). The 1998-99 survey documented no exceedences (0/12) of the 10 NTU turbidity standard at the Catwalk site (FS). However, 4/12 (33.3%) exceedences were documented at the Glenwood Site (NS). We have assessed this as partially supporting the use

Turbidity will be retained as a cause of non-support

154. Mineral Creek from the mouth on the San Francisco River to the headwaters (WBS SFR4-20200, WQS 2603)

Previously listed for metals (Al), temperature and turbidity. There are no data for this reach since 1975. This information is considered to be inadequate to make a listing. The stream will be sampled during the next intensive survey and reassessed to determine the appropriate listing.

1998 ACTION: The reach was removed from the 303(d) list.

2000 ACTION:

Metals (Al chronic): Mineral Creek was sampled a total of 7 time for metals. Of these, one day the channel was dry and 4/6 (66.6%) of the remaining days Aluminum was at Chronic toxicity levels.

Metals (Al chronic) will be added as a cause of non-support for this reach

Temperature: Mineral Creek was monitored a total of 11 times for temperature. Of these, one day the channel was dry and 5/10 (50.%) exceeded the temperature standard.

Temperature will be added as a cause of non-support for this reach

155. South Fork of Negrito Creek from the confluence with the North Fork to the headwaters (WBS SFR4-20620, WQS 2603)

Previously listed for reduction of riparian vegetation and streambank destabilization. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with unknown as the cause of non-support.

2000 ACTION:

Temperature: One thermograph was deployed on South Negrito Creek approximately 300 feet above the confluence with Fork Negrito Creek. A 17.2% exceedence (914/5330) of the temperature standard was recorded.

Temperature will be added as a cause of non-support for this reach

156. Silver Creek from the mouth on Mineral Creek to Little Fannie Mine (WQS 2603)

Previously listed for cyanide and aluminum. No associated physical/chemical data are available.

1998 ACTION: The reach was retained on the 303(d) with cyanide and aluminum as the causes of non-support.

2000 ACTION:

Metals (Al chronic): Silver Creek was monitored a total of 11 times. Of these, 5 days the channel was dry. No exceedences of any heavy metal standard were recorded during the remaining 6 sampling times.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for metals on Silver Creek.

Cyanide: Silver Creek was monitored a total of 11 times. Of these, 5 days the channel was dry.

No exceedences of cyanide were recorded during the remaining 6 sampling times.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for cyanide on Silver Creek.

Temperature: Silver Creek was monitored a total of 11 times. Of these, 5 days the channel was dry and 1/6 (16.6%) exceeded the temperature standard.

Add to the 305(b) Report as FSIO.

Turbidity: Silver Creek was monitored a total of 11 times. Of these, 5 days the channel was dry and 2/6 (16.6%) exceeded the 10 NTU Turbidity Standard.

Turbidity will be added as a cause of non-support for this reach

Conductivity: Silver Creek was monitored a total of 11 times. Of these, 5 days the channel was dry and 2/6 (33.3%) exceeded the conductivity standard.

Conductivity will be added as a cause of non-support for this reach

157. Negrito Creek from the mouth on the Tularosa River to South Fork Negrito Creek (WBS SFR1-20601, WQS 2603)

Previously listed for temperature and plant nutrients. There is only one sampling station on this reach. All data are from a 1990 survey. For temperature, 1/5 samples exceeded the criteria making this reach Full Support, Impacts Observed. The assessment review also found that for total phosphorus, 3/5 samples exceeded the criteria. Data for total phosphorus are partially supporting the designated use. A biological assessment was conducted at one station (SFR603.004030) in 1990. This assessment indicated Full Support, Impacts Observed (76% of reference). The Hilsenhoff Biotic Index was 4.53 indicating plant nutrients were not a problem.

1998 ACTION: Temperature and plant nutrients were removed as causes of non-support with unknown listed as a cause of non-support.

2000 ACTION:

Stream Bottom Deposits: Two monitoring sites were located on the Negrito Creek Segment 2603. They include: Negrito Creek below South Fork & Negrito Above Tularosa.

Based on data gathered during the 1998-99 survey and attainment matrix Table 4 contained within the Draft Protocol for the Assessment of Stream Bottom Deposits, these sites rank as Fully Supporting Impacts Observed (FSIO) and Partially Supporting (PS). Scores were as follows: Negrito Below South Fork 78% bio, 54.13 emb, and 7% fines (Table 4 FSIO). Negrito Above Tularosa 57% bio.; 37.8 emb.; and 5% fines (Table 4 PS) The low percentage of fine sediments (7 and 5% respectively) implies that the macroinvertebrate communities at the Negrito Above Tularosa site are likely adversely effected by something other than stream bottom deposits. Morphological data collected at each site further supports the conclusion that this reach is NOT physically impaired.

Add to the 305(b) Report as FSIO.

Temperature: One thermograph was deployed on the Negrito Creek approximately 300 feet below the confluence with South Fork Negrito Creek. A 14.3% exceedence (690/4829) of the temperature standard was recorded.

Add to the 305(b) Report as FSIO.

pH: Negrito Creek was monitored a total of 11 times in 1998-99. Of these, a total of 1/11 (9.1%) exceeded the pH standard.

Add to the 305(b) Report as FSIO.

158. Tularosa River from the mouth on the San Francisco River to Apache Creek (WBS SFR4-20600, WQS 2603)

Listed for temperature, 4/5 (80%) samples taken during a 1990 survey exceeded standards. This reach is Partially Supporting for temperature. A biological assessment was conducted at two stations on the Tularosa River in 1990. This assessment indicated full support at station SFR603.004025 (86% of reference). Station SFR603.004050 was the reference station.

1998 ACTION: The reach was not added due to the biological assessment showing full support of the fishery use.

2000 ACTION:

Stream Bottom Deposits: Three monitoring sites were located on the Tularosa River Segment 2603. They include: Tularosa Above SFR; Tularosa at FR 233; and Tularosa above Aragon. Based on data gathered during the 1998-99 survey and attainment matrix Tables 2 &4 contained within the Draft Protocol for the Assessment of Stream Bottom Deposits, this reach ranks as Fully Supporting and/or Full Support Impacts Observed. Scores were as follows:
Tularosa Above SFR 78% bio, 58.8 emb, and 28.6% fines (Table 4 FSIO). Tularosa at FR 233 83% bio. n/a emb.; and 9% fines (Table 2 & 4 FS) Tularosa above Aragon 70% bio.; n/a emb.; and 14% fines (Table 2 & 4 FS)

Add to the 305(b) Report as FSIO.

Temperature: Two thermographs were deployed on the Tularosa River segment (2603) one approximately 1 mile upstream of the confluence with the San Francisco River (Tularosa above SFR) and the other at Forest Road 233 crossing (Tularosa at Forest Road 233). No exceedences of the segment- specific 25.0°C temperature were recorded at the Tularosa above SFR site (0/1832). However, exceedences were recorded at the Tularosa at Forest Road 233. (17/5432).

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for temperature on the Tularosa River.

Conductivity: Three sampling sites were located on the Tularosa River segment 2603. Tularosa above SFR, Tularosa at Forest Road 233, and Tularosa above Aragon. The 1998-99 survey documented a 36.4% exceedence (4/11) for Conductivity at one site (Tularosa River at Forest Road 233). However, no exceedences (0/22) were documented at the other two locations (Tularosa River above SFR and Tularosa above Aragon)

Conductivity will be added as a cause of non-support for this reach

159. Apache Creek at its mouth on the Tularosa River to Hardcastle Canyon (WBS SFR4-20710, WQS 2603)

Previously listed for temperature, conductivity, total phosphorus and fecal coliform. There is only one sampling station on this reach. All data are from a 1990 survey. For temperature, 5/5 (100%) of the samples exceeded the criteria. For conductivity, 5/5 (100%) of the samples exceeded the criteria. For total phosphorus 4/5 (80%) of the samples exceeded the criteria. For fecal coliform, 1/1 (100%) of the samples exceeded criteria. The criteria for temperature, conductivity, and total phosphorus are not supporting the designated use. Fecal coliform is Full Support, Impacts Observed.

1998 ACTION: Fecal coliform was removed as a cause of non-support. Temperature, conductivity and total phosphorus were retained as causes of non-support.

2000 ACTION:

Temperature: Apache Creek was sampled a total of 11 times. Of these, the channel was dry three times and 1/8 exceeded the 25.0°C HQCWF standard. (12.5% exceedence)

Add to the 305(b) Report as FSIO.

Conductivity: Apache Creek was sampled a total of 11 times. Of these, the channel was dry three times and 7/8 exceeded the conductivity standard. (87.5% exceedence)

Conductivity will be retained as a cause of non-support

Total Phosphorus: Apache Creek was sampled a total of 11 times. Of these, the channel was dry three times and 8/8 exceeded the standard for total phosphorous. (100% exceedence)

There is no longer a standard associated with total phosphorus. The Nutrient Assessment Protocol will be used to assess nutrient loading on this reach.

Dissolved Oxygen (DO): Apache Creek was monitored a total of 11 times. Of these, the channel was dry three times and 1/8 exceeded the DO standard (12.5% exceedence).

Add to the 305(b) Report as FSIO.

160. San Francisco River from Largo Canyon to the New Mexico-Arizona border (WBS SFR4-30000, WQS 2602)

Previously listed for temperature, pH, total ammonia and plant nutrients. There are two sampling stations on this reach (SFR602.006035 and SFR602.006040). All data are from 1992 and 1995 surveys. For temperature, at station SFR602.006040, 0/9 of the samples exceeded the criteria in the 1995 survey, while 1/3 of the samples taken in 1992 exceeded the criteria. At station SFR602.005035, temperature 2/9 (22%) of the samples exceeded the criteria in the 1995 survey, while 0/3 of the samples taken in 1992 exceeded the criteria. For pH, at station SFR602.006040, 1/9 (11%) of the samples exceeded the criteria in the 1995 survey, while 1/3 of the samples taken in 1992 exceeded the criteria. At station SFR602.005035, pH 2/9 (22%) of the samples exceeded the criteria in the 1995 survey, while 0/3 of the samples taken in 1992 exceeded the criteria. For total ammonia, at station SFR602.006040, 1/9 (11%) of the samples exceeded the criteria in the 1995 survey, while 3/3 (100%) of the samples taken in 1992 exceeded the criteria. At station SFR602.005035, total ammonia 0/9 of the samples exceeded the criteria in the 1995 survey, while 0/4 (0%) of the samples taken in 1992 exceeded the criteria. For total phosphorus, at station SFR602.006040, 1/10 (10%) of the samples exceeded the criteria in the 1995 survey, while 3/3 of the samples taken in 1992 exceeded the criteria. At station SFR602.005035, total phosphorus 0/9 of the samples exceeded the criteria in the 1995 survey, while 2/4 of the samples taken in 1992 exceeded the criteria. For temperature, station SFR602.006040 is fully supporting its designated use, while station SFR602.005035 is partially supporting its designated use. For pH, station SFR602.006040 is fully supporting impacts observed, its designated use, while station SFR602.005035 is partially supporting its designated use. For total ammonia, station SFR602.006040 is fully supporting impacts observed, for its designated use, while station SFR602.005035 is fully supporting its designated use. For total phosphorus, station SFR602.006040 is fully supporting impacts observed, its designated use, while station SFR602.005035 is fully supporting its designated use. There are two biological assessments on this reach at one station (1992 and 1995) which indicate full support of the fishery use. In 1992 station 6040 was 100% of the reference while station 6035 was 81% of the reference. (Data from 1987 collected from station 6040 was the reference). In 1996 station 6035 was 90% of the reference (station 6040 was the reference).

1998 ACTION: A portion of this reach, the San Francisco River from Centerfire Creek to the New Mexico Arizona border (15 miles) was retained on the 303(d) list with temperature, pH, ammonia and plant nutrients listed as causes of non-support.

2000 ACTION:

Stream Bottom Deposits: Three monitoring sites were located on the San Francisco River Segment 2302. They include: SFR at above Reserve; SFR Below the Box; and SFR above Luna. Based on data gathered during the 1998-99 survey and attainment matrix Tables 2 &4 contained within the Draft Protocol for the Assessment of Stream Bottom Deposits, this reach ranks as

Fully Supporting and/or Full Support Impacts Observed. Scores were as follows: SFR Above Reserve 83% bio, n/a emb, and 36% fines (Table 2 FS).
SFR Below the Box 78% bio.; 56.7 emb.; and 59% fines (Table 4 FSIO) SFR Above Luna (Ref.) 100% bio.; 52.7 emb.; and 11% fines (Table 4 FS).

Add to the 305(b) Report as FSIO.

Turbidity: A 1998-99 survey indicated an 18% exceedence, whereby 2/11 samples exceeded the 25 NTU standard for primary contact recreation.

Turbidity will be added as a cause of non-support for this reach

Temperature: One thermograph was deployed in this segment (2602). The thermograph was deployed at Head-of-the-ditch campground above the town of Luna. Temperatures exceeded the 25.0°C segment-specific water quality standard 52/1725 times (3% exceedence), between 7/15/98 and 9/25/98 with a maximum temperature of 28.5°C recorded.

Temperature will be retained as a cause of non-support

pH: The 1998-99 survey indicated no exceedences in 11 samples.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for pH on this reach of the San Francisco River.

Total Ammonia: The 1998-99 survey indicated no exceedences in 11 samples.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for total ammonia on this reach of the San Francisco River.

Plant Nutrients: Plant nutrients will remain listed as a cause of non-support.

Plant nutrients will be retained as a cause of non-support

161. Centerfire Creek from the mouth on the San Francisco River to the headwaters (WBS SFR4-30300, WQS 2603)

Previously listed for temperature, conductivity and plant nutrients. There is only one sample station on this reach. All data are from a 1992 survey.

For temperature, 1/3 (33%) of the samples exceeded the criteria. For conductivity, 3/3 (100%) of the samples exceeded the criteria. Temperature is Full Support, Impacts Observed. Conductivity is partially supported.

1998 ACTION: Temperature was removed as a cause of non-support an will be listed in the 1998 305(b) Report as full support, impacts observed. Conductivity and plant nutrients were retained as causes of non-support.

162. Trout Creek from the mouth on the San Francisco River to the headwaters (WBS SFR4-30400, WQS 2603)

Previously listed for total phosphorus. There is only one sample station on this reach. All data are from a 1992 survey. For total phosphorus, 1/1 (100%) of the samples exceeded the criteria. Through application of the assessment protocol total phosphorus is Full Support, Impacts Observed.

1998 ACTION: The reach was removed from the 303(d) list and will be added to the 305(b) list as Full Support, Impacts Observed for phosphorus.

2000 ACTION:

Total Phosphorus: Trout Creek was monitored 8 times for nutrients. Of these, 8/8 (100%) exceeded the Total Phosphorous standard with an average value of 0.145 mg/l

There is no longer a standard associated with total phosphorus. The Nutrient Assessment Protocol will be used to assess nutrient loading on this reach.

Metals (Pb chronic): Trout Creek was monitored 6 times for metals. Of these, 1/6 exceeded the Chronic Standard for lead.

Add to the 305(b) Report as FSIO.

163. Mule Creek from the mouth on the San Francisco River to Mule Springs (WBS SFR4-10100, WQS 2603)

Previously listed for reduction of riparian vegetation and streambank destabilization. A 1985 NMED survey of Mule Creek found that water quality standards were met in Mule Creek.

1998 ACTION: The reach was removed from the 303(d) list.

2000 ACTION:

Field surveys confirmed that all applicable water quality standards for this reach are being met.

164. Tularosa River from the mouth on the San Francisco River to Apache Creek (WBS SFR4-20600, WQS 2603)

Previously listed for temperature, pH, fecal coliform, total ammonia, total phosphorus and turbidity. There are two sampling stations on this reach. All data are from 1990, 1992 and 1995 surveys. For temperature, at station SFR603.004035, 1/5 of the samples exceeded the criteria in the 1990 survey this station was not resurveyed in the past 5 years. At station SFR603.004025 3/5 (60%) of the samples taken in 1990 exceeded the criteria, while 1/3 (33%) of the samples taken in 1992 exceeded criteria and 2/9 (22%) of the samples taken in 1995 exceeded the criteria. For pH, at station SFR603.004035, 0/5 (0%) of the samples exceeded the criteria in the 1990 survey. At station SFR603.004025 0/5 (0%) of the samples taken in 1990 exceeded the criteria, while 2/3 (66%) of the samples taken in the 1992 survey exceeded the criteria and 5/9 (55%) of the samples taken in 1995 exceeded the criteria. For fecal coliform, at station SFR603.004035, 1/1 (100%) of the samples exceeded the criteria in the 1990 survey. At station SFR603.004025, 0/1 (0%) of the samples taken in 1990 exceeded the criteria , while 1/1 (100%) of the samples taken in the 1992 survey exceeded the criteria and 0/3 (0%) of the samples taken in 1995 exceeded the criteria, indicating full support for the last five years. For total ammonia, at station SFR603.004035, 1/5 (20%) of the samples taken in the 1990 survey exceeded the criteria. At station SFR603.004025, 1/5 (20%) of the samples taken in the 1990 survey exceeded the criteria, while 0/3 (0%) of the samples taken in 1992 exceeded the criteria and 1/9 (11%) of the samples taken in 1995 exceeded the criteria, indicating full support in the last five years. For total phosphorus, at station SFR603.004035, 1/5 of the samples taken in the 1990 survey exceeded the criteria. At station SFR603.004025, 4/5 (80%) of the samples taken in the 1990 survey exceeded the criteria, while 1/3 (33%) of the samples taken in 1992 exceeded the criteria and 0/9 (0%) of the samples taken in 1995 exceeded the criteria, indicating full support for the last five years. For turbidity, at station SFR603.004035, 2/5 (40%) of the samples taken in the 1990 survey exceeded the criteria. At station SFR603.004025, 1/8 (12%) of the samples taken within 5-10 years exceeded the criteria, while 0/9 (0%) of the samples taken in the past 5 years exceeded the criteria. For temperature, stations SFR603.004035 and SFR603.004025 are partially supported their designated use. For pH, station SFR603.004035 is fully supporting its designated use, while station SFR603.004025 is Not Supporting its designated use. For fecal coliform, station SFR603.004035 is full supporting, impacts observed, while station SFR603.004025 is fully supporting its designated use. For total ammonia, stations SFR603.004035 and SFR603.004025 are fully support, impacts observed. For total phosphorus, station SFR603.004035 is Full Support, Impacts Observed, while station SFR603.004025 is fully supporting its designated use. For turbidity, station SFR603.004035 is partially supported, while station SFR603.004025 is fully supporting its designated use.

1998 ACTION: Fecal coliform, ammonia and phosphorus were removed as causes of non-support. Temperature, pH and turbidity were retained as causes of non-support.

2000 ACTION:

Temperature: Two thermographs were deployed on the Tularosa River segment (2603), one approximately 1 mile upstream of the confluence with the San Francisco River (Tularosa above SFR) and the other at Forest Road 233 crossing (Tularosa at Forest Road 233). No exceedences of the segment- specific 25.0°C temperature were recorded at the Tularosa above SFR site (0/1832). However, exceedences were recorded at the Tularosa at Forest Road 233 (17/5432).

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for temperature on the Tularosa River.

pH: Three sampling sites were located on the Tularosa River segment 2603. Tularosa above SFR, Tularosa at Forest Road 233, and Tularosa above Aragon. No exceedences of the pH Standard were recorded at any site 0/33.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for pH on the Tularosa River.

Turbidity: Three sampling sites were located on the Tularosa River segment 2603. Tularosa above SFR, Tularosa at Forest Road 233, and Tularosa above Aragon. No exceedences of the 10 NTU Turbidity Standard were recorded at any site 0/33.

Water quality standards, as assessed using the 1998 Assessment Protocol, are currently being met for turbidity on the Tularosa River.

Stream Bottom Deposits: Three monitoring sites were located on the Tularosa River Segment 2603. They include: Tularosa Above SFR; Tularosa at FR 233; and Tularosa above Aragon. Based on data gathered during the 1998-99 survey and attainment matrix Tables 2 &4 contained within the Draft Protocol for the Assessment of Stream Bottom Deposits, this reach ranks as Fully Supporting and/or Full Support Impacts Observed. Scores were as follows:

Tularosa Above SFR 78% bio, 58.8 emb, and 28.6% fines (Table 4 FSIO). Tularosa at FR 233 83% bio. n/a emb.; and 9% fines (Table 2 & 4 FS)

Tularosa above Aragon 70% bio.; n/a emb.; and 14% fines (Table 2 & 4 FS)

Add to the 305(b) Report as FSIO.

Conductivity:	Three sampling sites were located on the Tularosa River segment 2603. Tularosa above SFR, Tularosa at Forest Road 233, and Tularosa above Aragon. The 1998-99 survey documented a 36.4% exceedence (4/11) for Conductivity at one site (Tularosa River at Forest Road 233). However, no exceedences (0/22) were documented at the other two locations (Tularosa River above SFR and Tularosa above Aragon)

Conductivity will be added as a cause of non-support for this reach

CANADIAN RIVER BASIN

165. Canadian River from the New Mexico-Texas border to Ute Dam (Canadian River, 2301, WBS CR6-10000)

Previously listed for metals (mercury), salinity, plant nutrients and stream bottom deposits. There are two sampling stations on this reach. A 1988 intensive survey by NMED found no exceedences of the mercury criteria (0/1). The survey also found that the levels of nitrogen and phosphorus were low. There were no exceedences of the TDS (salinity) criteria for USGS station 07227140 (1969-1986). As the reach is designated as a limited warmwater fishery, stream bottom deposits was proposed to be removed.

1998 ACTION: The reach was removed from the 303(d) list.

2000 ACTION: None

166. Rio la Casa from the mouth on the Mora River to the confluence of North and South Forks (Canadian River, 2306, WBS CR4-30100)

Previously listed for turbidity and stream bottom deposits. There is one sampling station on this reach. All data are from 1988. Turbidity data indicated full support (0/2).

1998 ACTION: Turbidity was removed as a cause of non-support. Stream bottom deposits was retained as a cause of non-support.

2000 ACTION: None

167. Hunter Creek from inflow to Throttle Reservoir to the headwaters (Canadian River, 2305, WBS CR1-10330)

Previously listed for fecal coliform. There is one sampling station on this reach. There is one data point (600/100ml) from 1989 that indicate Full Support, Impacts Observed.

1998 ACTION: The reach was removed from the 303(d) list and will be added to the 305(b) list as Full Support, Impacts Observed.

2000 ACTION: None

168. Little Coyote Creek from inflow to Black Lake to headwaters (Canadian River, 2306, WBS CR4-20350)

New listing for metals (Al), turbidity and stream bottom deposits. There are four sampling stations on this reach. All data are from a 1991 survey. No dissolved aluminum data was collected. Turbidity remains for all stations with the exception of CRB306.005078. Temperature is added to the list for all but station CRB306.00507. This is a partially supporting listing. Total phosphorus is also added to the list for all stations. This is a not supporting listing.

1998 ACTION: Aluminum was removed as a cause of non-support. Turbidity and stream bottom deposits were retained and phosphorus and temperature were added as causes of non-support.

2000 ACTION:

Total Phosphorus: Total phosphorus will be removed from the list.

There is no longer a standard associated with total phosphorus. The Nutrient Assessment Protocol will be used to assess nutrient loading on this reach.

169. Conchas River from inflow to Conchas Reservoir to the headwaters (Canadian River, 2305, WBS CR5-10000)

Previously listed for metals (Al) and stream bottom deposits. There is one sampling station on this reach. There is no dissolved aluminum data. Because it is a limited warmwater fishery, stream bottom deposits was proposed to be removed as a cause of non-support.

1998 ACTION: The reach was removed from the 303(d) list.

2000 ACTION: None

170. Revuelto Creek from its mouth on the Canadian River (Canadian River, 2301, WBS CR8-10000)

Previously listed for metals, total ammonia and plant nutrients. Limited total ammonia data within the last 12 years has a ratio of 0/3. The levels of ammonia seen are approximately 20% of the criteria value. This stream is an intermittent stream according to USGS.

1998 ACTION: This reach was removed from the 1998 303(d) list.

2000 ACTION: None

171. Mora River from Wolf Creek to Rio la Casa (Canadian River, 2305.3, WBS CR4-20000)

Previously listed for plant nutrients. There is only one sample station on this reach. All data are from

1988. Total phosphorus values are somewhat elevated. There is inadequate data to make a definitive determination.

1998 ACTION: This reach will continue to be listed on the 1998 303(d) list with plant nutrients as the cause.

2000 ACTION:

Plant Nutrients: A three season study was conducted on this reach in 1999. The study (using the Nutrient Assessment Protocol) concluded that this reach is nutrient limited and should remain listed for plant nutrients.

Plant nutrients will be retained as a cause of non-support.

172. Mora River from Rio la Casa to headwaters (Canadian River, 2306, WBS CR4-30000)

Previously listed for total phosphorus, fecal coliform, turbidity, and stream bottom deposits. There are two sampling stations on this reach. All data is from a 1986 survey. Data at two stations had ratios of 5/5 and 1/5 for total phosphorus. Turbidity ratios are similar at 4/5 and 1/4. Fecal coliform ratios are 1/1 and 0/1.

1998 ACTION: This reach will continue to be listed on the 1998 303(d) list with total phosphorus, turbidity, and stream bottom deposits as the cause above stations 0030. The reach will be listed on the 1998 305(b) lists as Full Support, Impacts Observed for fecal coliform.

2000 ACTION:

Total Phosphorus: Total phosphorus will be removed from the list.

There is no longer a standard associated with total phosphorus. The Nutrient Assessment Protocol will be used to assess nutrient loading on this reach.

173. Raton Creek from the mouth on Chicorica Creek to the headwaters (Canadian River, 2305, WBS CR1-10410)

Previously listed for metals (Cu), total ammonia and plant nutrients. There are two sampling stations on this reach. All data are from 1989, 1991, 1993, and 1995 surveys. The data ratios for dissolved copper are 0/3,03/ and 0/1 within the last 12 years. Data ratios for total ammonia within the last 12 years are 0/5,0/5, and 02. There are supporting data to justify supporting or removing the plant nutrients listing.

1998 ACTION: Copper and total ammonia will be removed as causes of non-support for this reach. This reach will continue to be listed on the 1998 303(d) list with plant nutrients as the cause of non-support.

2000 ACTION: None

174. Rayado Creek from the mouth on the Cimarron River to Miami Lake diversion (Canadian River, 2305.3, WBS CR2-10100)

Previously listed for stream bottom deposits and fecal coliform. There is only one sample station on this reach. There is only one data point in the STORET database for fecal coliform. This value is less than the fecal coliform criteria for this segment.

1998 ACTION: Fecal coliform will be removed as a cause of non-support for this reach. This reach will continue to be listed on the 1998 303(d) list with stream bottom deposits as the cause.

2000 ACTION:

Stream Bottom Deposits: Stream bottom deposits will be retained as a cause of non-support.

175. Ponil Creek from the mouth on the Cimarron River to the confluence of North Ponil and South Ponil Creeks (Canadian River, 2306, WBS CR2-10300)

Previously listed for temperature, conductivity, turbidity, fecal coliform and total phosphorus. This segment will be evaluated in the 1998 surveys for use attainment. Data is available from three stations two NMED and one USGS. One NMED station is at the USGS station so these values will be summed. Data ratios for temperature are erratic. At the lower station ratios are 0/5 and at the two higher station the ratio is 3/16 within the last 5 years and 7/32 for data 5-10 years old. For conductivity the ratios are 5/5 at the lower station and 0/52 at the upper station. Turbidity is available from one survey which took place after a rain event. Ratios at the lower station are 5/5 and 0/5 at the higher station. Fecal coliform is 0/2 at the upper stations and 1/1 at the lower station. Total phosphorus values are similar with 0/5 exceedences at the upper stations and 5/5 at the lower station.

1998 ACTION: This reach will continue to be listed as Not Supported on the 1998 303(d) list with temperature, conductivity, turbidity, fecal coliform, and total phosphorus.

2000 ACTION:

Temperature: One thermograph was deployed on this reach. The thermograph was deployed above the USGS gage. The

thermograph exceeded the HQCWF criterion 342/1,632 times with a maximum temperature of 28°C. This site exceeded the Temperature Protocol for a one-time maximum temperature (23°C).

Temperature will be retained as a cause of non-support for this reach

Conductivity: Two stations were used to assess this reach. One is at Hwy 58 below the Town of Cimarron and the second is above the town. Conductivity at the upper station was 0/8 (Standards Segment 2306). At the lower station the exceedence ratio was 4/8. There is no criterion for this Standard Segment 2305.3. This segment is thought to be mis-classified as a HQCWF and a UAA is recommended.

Conductivity will be removed as a cause of non-support for this reach

Turbidity: The exceedence ratio for turbidity at the upper station on this reach was 6/8. There are no criteria for the lower Segment 2305.3.

Turbidity will be retained as a cause of non-support for the upper station

Total Phosphorus: The exceedence ratio for total phosphorus at the upper station was 0/5. There are no criteria for total phosphorus at the lower station.

There is no longer a standard associated with total phosphorus. The Nutrient Assessment Protocol indicates no impairment due to nutrient loading on this reach.

Fecal Coliform: The exceedence ratio for fecal coliform at the upper station on this reach was 0/2 while it was 1/2 at the lower station below the WWTP.

Add to the 305(b) Report as FSIO.

Stream Bottom Deposits: One site was at the USGS gage was used to characterize this reach. The embeddedness value for this reach was 55% indicating an impaired stream bottom habitat.

Stream bottom deposits will be added to this reach as a cause of non-support

Metals (Al chronic): One sampling station, Ponil Creek at the Gage had an

exceedence ratio of 6/9 for dissolved aluminum.

Metals (al chronic) will be added to this reach as a cause of non-support

176. Mora River from the mouth on the Canadian River to Wolf Creek (Canadian River, 2305, WBS CR4-10000)

Previously listed for metals chronic (Pb), total ammonia and fecal coliform. There is only one sample station on this reach. All data are from a 1986 survey. Total ammonia had an acute exceedence ratio of 0/5 and a chronic exceedence ratio of 1/5. There are no dissolved lead data in STORET therefore there is insufficient data to modify the listing. Fecal coliform data is limited to 1/1 data (440/100 ml).

1998 ACTION: This reach will be listed on the 1998 303(d) list with lead (chronic) as the cause of non-support. The reach will be listed as Full Support, Impacts Observed on the 1998 305(b) list with fecal coliform and chronic total ammonia as a cause.

2000 ACTION: None

177. Canadian River from inflow to Ute Reservoir to Conchas Dam (Canadian River, 2303, WBS CR6-20000)

Previously listed for metals (Hg), plant nutrients and stream bottom deposits. There are two sampling stations on this reach. Mercury data indicate full support for the fishery use as there were no exceedences of criteria in the last 10 years (0/3). The fishery use is a LWWF and accordingly the stream bottom deposits listing has been dropped. Data was reviewed to assess the plant nutrients listing and it has been determined that this listing is not supported. There are several reports on this segment of the river which do not include any indications of nutrient enrichment. Chemical parameters of nitrogen, phosphorus, and DO are within watershed norms.

1998 ACTION: This reach has been removed from the 1998 303(d) list.

2000 ACTION: None

178. Coyote Creek from the mouth on the Mora River to Black Lake (Canadian River, 2306, WBS CR4-20300)

New listing for turbidity, total phosphorus, fecal coliform, total ammonia, and stream bottom deposits. There are four sampling stations on this reach. All data are from 1986, 1992 and 1993 surveys. Data ratios for turbidity are 0/6, 0/6, 0/6, and 0/1. Total phosphorus ratios are 1/6, 0/6, 1/6, and 0/1 Fecal coliform data indicate Full Support, Impacts Observed 1/1(230 /100 ml) in 1986. Total ammonia ratios are 0/4, 0/4, and 0/4.

1998 ACTION: Turbidity and total ammonia will be removed as causes of non-support for this reach. Total phosphorus will be removed as a cause of non-support but will be listed on the 1998 305(b) list as Full Support, Impacts Observed for this parameter and fecal coliform. This reach will continue to be listed as Not Supported on the 1998 303(d) list with stream bottom deposits as the cause.

2000 ACTION: None

179. Manuelitas Creek from the mouth on Sapello River to the headwaters (Canadian River, 2306, WBS CR4-20210)

Listed for turbidity and stream bottom deposits. Turbidity values at two stations were 1/5 and 4/5. This data is misleading in that the sampling took place during a runoff event from a rain. For example at the lower station values were above criteria until the last day when the flows subsided and were then within the reach criteria. A biological assessment conducted by NMED in 1990 indicate full support of the fishery use. The biological assessment was 90% of the reference site. It is not the opinion of the biologist conducting this assessment that this reach is impacted by stream bottom deposits. The impacts from the turbidity exceedences are determined to be overridden by the high quality biology at this site.

1998 ACTION: This reach has been removed from the 1998 303(d) list.

2000 ACTION: None

180. Sapello River from Manuelitas Creek to the headwaters (Canadian River, 2306, WBS CR4-20200)

Previously listed for stream bottom deposits. A biological assessment conducted by NMED in 1990 indicate full support of fishery use. The biological assessment was 80% of the reference site.

1998 ACTION: This reach has been removed from the 1998 303(d) list.

2000 ACTION: None

181. Sapello River from Mora River to Manuelitas Creek (Canadian River, 2305.3, WBS CR4-20100)

Previously listed for turbidity. While listed for turbidity, there are no applicable numeric turbidity criteria for this marginal coldwater and warmwater fishery. A biological assessment conducted by NMED in 1990 indicate Full Support, Impacts Observed for the fishery use. The biological assessment was 70% of the reference site with references to in stream impacts from human activities.

1998 ACTION: This reach is listed as Partially Supported on the 1998 303(d) list with unknown as the cause.

2000 ACTION: None

182. Manuelas Creek from Wheaton Creek to Manuelitas Canyon (Canadian River, 2306, WBS CR3-20300)

Previously listed for reduction of riparian vegetation and streambank destabilization.

1998 ACTION: This reach will continue to be listed as Partially Supported on the 1998 303(d) list with unknown as the cause.

2000 ACTION: None

183. Ocate Creek from below the Village of Ocate to Wheaton Creek (Canadian River, 2305.3, 2306, WBS CR3-20200)

Previously listed for reduction of riparian vegetation and streambank destabilization.

1998 ACTION: This reach will continue to be listed as Partially Supported on the 1998 303(d) list with unknown as the cause.

2000 ACTION: None

184. Canadian River from the Mora River to the Cimarron River (Canadian River, 2305, WBS CR3-20000)

Previously listed for plant nutrients and stream bottom deposits. There are two sampling stations on this reach. The fishery use is a LWWF and accordingly the stream bottom deposits listing has been dropped. Data was reviewed to assess the plant nutrients listing and it has been determined that this listing is not supported. There are several reports on this segment of the river which do not include any indications of nutrient enrichment. Chemical parameters of nitrogen, phosphorus, and DO are within watershed norms.

1998 ACTION: This reach has been removed from the 1998 303(d) list.

2000 ACTION: None

185. Canadian River from the inflow to the Conchas River to the Mora River (Canadian River, 2305, WBS CR3-10000)

Previously listed for plant nutrients and stream bottom deposits. There are two sampling stations on

this reach. The fishery use is a LWWF and accordingly the stream bottom deposits listing has been dropped. Data was reviewed to assess the plant nutrients listing and it has been determined that this listing is not supported. There are several reports on this segment of the river which do not include any indications of nutrient enrichment. Chemical parameters of nitrogen, phosphorus, and DO are within watershed norms.

1998 ACTION: This reach has been removed from the 1998 303(d) list.

2000 ACTION: None

186. Cieneguilla Creek from the inflow to Eagle Nest Lake to the headwaters (Canadian River, 2306, WBS CR2-50000)

Previously listed for turbidity, fecal coliform, stream bottom deposits and plant nutrients. There are five sampling stations on this reach. All data are from 1992 and 1993 surveys. Turbidity ratios are 0/6,2/10,3/9,3/9, and 3/8. Fecal coliform ratios are 1/3,1/3,0/3,1/3, and 1/6. A biological assessment was performed on Cieneguilla Creek in 1993. Five biological stations were surveyed on this stream. The upper most station (CC1) was used as the reference site for this survey. Another station above the WWTP (CC3) was also FS (87%). A station located at the WWTP and near a horse corral was NS (54%). The station immediately down stream from the WWTP was FS (80%). The most down stream station (CC5) was only PS (61%). This is attributed to the accumulation of impacts from the upper watershed.

1998 ACTION: Fecal coliform will be listed on the 1998 305(b) report as Full Support, Impacts Observed. The reach will continue to be listed on the 303(d) list as Not Supported for turbidity, stream bottom deposits, and plant nutrients.

2000 ACTION:

Plant Nutrients: Field assessments were conducted using the draft Nutrient Assessment Protocol and draft Source Documentation Protocol. Since there is no numeric standard for plant nutrients in New Mexico, the narrative standard for plant nutrients is evaluated using this protocol. No plant nutrient impairments were found along this reach. There were no exceedences of nutrient related criteria such as total phosphorus, nitrogen, pH and dissolved oxygen during any sampling season. As well, there were no observations of nutrient over-enrichment noted on field sheets during any sampling season. In addition, there was a biological assessment conducted on Cieneguilla Creek in October of 1998. The Hilsenhoff Biotic Index (HBI) which is used as an indicator of nutrient enrichment showed calculated values of

3.93 and 3.94 respectively. These numbers fall in the HBI range of 3.51-4.50 meaning water quality is very good with possible to slight organic pollution present.

Water quality standards, as assessed using the 1998 Assessment Protocol and 1999 draft Nutrient Assessment Protocol are currently being met for plant nutrients on Cieneguilla Creek.

Stream Bottom Deposits: This stream is characterized by two stations. The upper station is Cieneguilla Creek below Crooked Creek. This upper station is a Rosgen E5 stream type with a % fines <2mm of 66% indicating a high level of impairment. The lower station is Cieneguilla Creek at the USGS Gage. This lower station is a Rosgen F5 stream type with a % fines <2mm of 64% also indicating a high level of impairment.

A TMDL was developed for Cieneguilla Creek to address stream bottom deposits.

Turbidity: Four sampling stations on this reach have 1998-1999 exceedence ratios of 7/10, 3/8, 4/7 and 2/10 respectively.

A TMDL was developed for Cieneguilla Creek to address turbidity.

Fecal Coliform: Confirmation samples for fecal coliform were taken in 1998 and 1999.

The summer sample taken at Angel Fire Road 110fcu/100ml on this reach.

A TMDL was developed for Cieneguilla Creek to address fecal coliform.

Metals (Al chronic): The 4-day chronic sampling which was conducted during the spring had an average concentration of 292ug/l. There were no exceedences of the acute criterion.

Aluminum (chronic) will be added as a cause of non-support

Metals (Pb acute): The 4-day average for lead was below the chronic criterion but one sample was higher than the acute criterion.

Add to the 305(b) Report as FSIO.

Temperature: One thermograph was deployed on this reach. The thermograph was deployed where Crooked Creek turns into Cieneguilla Creek. The thermograph exceeded the HQCWF criterion 110/3,884 times with a maximum temperature of 22.46°C. This site exceeded the draft Temperature Protocol for hours of exceedence duration > 4hours, but no more than six hours in a 24-hour cycle, and for no more than three consecutive days.

Temperature will be added as a cause of non-support for this reach

187. Six-Mile Creek from the inflow to Eagle Nest Lake to the headwaters (Canadian River, 2306, WBS CR2-40000)

Previously listed for fecal coliform and plant nutrients. There is one sampling station on this reach. All data are from 1992 and 1993 surveys. Fecal coliform data indicate Full Support, Impacts Observed for the contact recreation use (1/3). A biological assessment conducted by NMED in 1990 indicate full support of the fishery use. The biological assessment was 83% of the reference site. There are no indications of plant nutrient enrichment on this reach.

1998 ACTION: The reach will be included on the 305(b) list as Full Support, Impacts Observed for fecal coliform. The reach has been removed from the 1998 303(d) list.

2000 ACTION:

Fecal Coliform: Confirmation samples for fecal coliform were taken in 1998 and 1999. The summer samples taken on Six-Mile Creek were 720fcu/100ml and 200fcu/100ml on this reach.

A TMDL was developed for Six-Mile Creek to address fecal coliform.

Turbidity: One sampling station on this reach has a 1998-1999 exceedence ratio of 5/10.

A TMDL was developed for Six-Mile Creek to address turbidity.

Plant Nutrients: Field assessments were conducted using the draft Nutrient Assessment Protocol and draft Source Documentation Protocol. Since there is no numeric standard for plant nutrients in New Mexico, the narrative standard for plant nutrients is evaluated using this protocol. No plant nutrient impairments were found along this reach. There were no

exceedences of nutrient related criteria such as total phosphorus, nitrogen, pH and dissolved oxygen during any sampling season. As well, there were no observations of nutrient over-enrichment noted on field sheets during any sampling season. In addition, there was a biological assessment conducted on Six-Mile Creek in October of 1993. The Hilsenhoff Biotic Index (HBI) which is used as an indicator of nutrient enrichment showed a calculated value of 5.20. This number falls in the HBI range of 4.51-5.50 meaning water quality is good with some organic pollution present.

Water quality standards, as assessed using the 1998 Assessment Protocol and 1999 draft Nutrient Assessment Protocol are currently being met for plant nutrients on Six-Mile Creek.

188. Moreno Creek from the inflow to Eagle Nest Lake to the headwaters (Canadian River, 2306, WBS CR2-30000)

Previously listed for fecal coliform and plant nutrients. There is one sampling station on this reach. All data are from 1992 and 1993 surveys. There are supporting data for fecal coliform with a ratio of 2/3. A biological assessment was conducted on Moreno Creek in 1993. The assessment of one station on Moreno Creek was Full Support, Impacts Observed (70%). The degradation at his site was attributed to poor habitat (58%).

1998 ACTION: This reach is on the 1998 303(d) list as Partially Supported for fecal coliform and plant nutrients.

2000 ACTION:

Fecal Coliform: Confirmation samples for fecal coliform were taken in 1998 and 1999. One of the summer samples taken on Moreno Creek was 220fcu/100ml on this reach.

A TMDL was developed for Moreno Creek to address fecal coliform.

Turbidity: One sampling station on this reach has a 1998-1999 exceedence ratio of 4/10.

A TMDL was developed for Moreno Creek to address turbidity.

Plant Nutrients: Field assessments were conducted in November of 1999 using the draft Nutrient Assessment Protocol and draft Source Documentation Protocol. Since there is no numeric standard

for plant nutrients in New Mexico, the narrative standard for plant nutrients is evaluated using this protocol. No plant nutrient impairments were found along this reach. There were no exceedences of nutrient related criteria such as total phosphorus, nitrogen, pH and dissolved oxygen during any sampling season. As well, there were no observations of nutrient over-enrichment noted on field sheets during any the three season study (May, July and October, 1998) sampling season. There was a biological assessment conducted on Moreno Creek in October of 1993. The macroinvertebrate community at he reference site appeared to be healthy and comprised of moderate numbers of pollution sensitive taxa.

Slightly impaired biological conditions were present at Moreno Creek, which were most likely the result of poor habitat conditions. The biological condition of Moreno Creek is rated as being 70% of the reference conditions, which according to the 1998 Assessment Protocol rates this stream as full support, impacts observed. Although the HBI index was high, overall macroinvertebrate numbers, taxa and several other metrics show acceptable values. The EPT Index for the reference site was 13, while Moreno Creek was rated a 10. The macroinvertebrate community as a whole is acceptable, although there is a shift in the community to midges which is reflected in the full support, impacts observed statement.

Add to the 305(b) Report as FSIO.

189. Ute Creek at its mouth on the Cimarron River (Canadian River, 2306, WBS CR2-20100)

Previously listed for turbidity, total phosphorus and total organic carbon. There is one sampling station on this reach. All data are from a 1989 survey. Turbidity ratios are 2/5.
Total phosphorus ratios are 2/5 and Total organic carbon ratios are 1/1.

1998 ACTION: Total organic carbon will be removed as a cause of non-support on the 1998 303(d) list and will be listed on the 1998 305(b) list as Full Support, Impacts Observed. This reach will continue to be listed on the 303(d) list as Partially Supporting for turbidity and total phosphorus.

2000 ACTION:

Turbidity: The ratio of exceedences for turbidity on this reach was 0/8.

Water quality standards, as assessed using the 1998 Assessment Protocol are currently being met for turbidity on Ute Creek.

Total Phosphorus: The ratio of exceedences for TP on this reach was 0/7.

There is no longer a standard associated with total phosphorus. The Nutrient Assessment Protocol indicated no impairment due to nutrient loading on this reach.

190. Cimarron River from Turkey Creek to Eagle Nest Dam (Canadian River, 2306, WBS CR2-20000)

Previously listed for total phosphorus. This listing is supported at station 11550 with ratios of 4/15 within 10 years. The ratio at station 11505 are 1/16.

1998 ACTION: This reach is included in the 1998 303(d) list as Not Supported for total phosphorus at the upper station only.

2000 ACTION:

Total Phosphorus: Two stations were sampled on this reach. The TP ratios were 0/4 and 0/11.

There is no longer a standard associated with total phosphorus. The Nutrient Assessment Protocol indicated no impairment due to nutrient loading on this reach.

Metals (Al Chronic): The 4-day average from the spring sampling for this site was 162ug/l. Results of four other samples collected in the summer and fall were all less than detect.

Aluminum (chronic) will be added as a cause of non-support

191. Middle Ponil Creek from the confluence with South Ponil Creek to the headwaters (Canadian River, 2306, WBS CR2-10610)

Previously listed for total phosphorus and stream bottom deposits. There are two sampling stations on this reach. All data is from a 1989 survey. There are supporting data for a total phosphorus listing at station CRB306.011065 (3/5) but not for station CRB306.011050 (0/5).

1998 ACTION: This reach is included in the 1998 303(d) list as Not Supported for total phosphorus at the upper station only.

2000 ACTION:

Total Phosphorus: The ratio of exceedences for the two stations on this reach was 0/4 and 0/5.

There is no longer a standard associated with total phosphorus. The Nutrient Assessment Protocol will be used to assess nutrient loadings to this reach.

Stream Bottom Deposits: Two stations characterize this reach. The upper site above FR 1950 is a B3 type stream with low % fines (16) and a moderate embeddedness of 48%. Embeddedness greater than 40% on a B-type stream is considered degraded. The lower station is a B4 type stream with a % fines value of 46 and an embeddedness value of 55%.

Stream bottom deposits will be retained as a cause of non-support

Temperature: One thermograph was deployed on this reach. The thermograph was deployed above the confluence with South Ponil Creek. The thermograph exceeded the HQCWF criterion 170/1,630 times with a maximum temperature of 25.5°C. This site exceeded the Temperature Protocol for a on-time maximum temperature (23°C).

Temperature will be added as a cause of non-support for this reach

Turbidity: The exceedence ratio for turbidity on this reach at the two stations was 2/8 and 2/8.

Turbidity will be added to the reach as a cause of non-support

Total Organic Carbon (TOC): The exceedence ratios for TOC on this reach were 1/4 at the lower site above Ponil Camp and 0/4 at the upper site.

Add the lower site to the 305(b) Report as FSIO.

192. McCrystal Creek from the confluence with North Ponil Creek to the headwaters (WQS, 2306)

2000 ACTION:

Temperature: One thermograph was deployed on this reach. The thermograph was deployed above McCrystal Creek

Campground. The thermograph exceeded the HQCWF criterion 57/4,853 times with a maximum temperature of 22.48°C. This site exceeded the Temperature Protocol for hours of exceedence duration > 4hours, but no more than six hours in a 24-hour cycle, and for no more than three consecutive days.

Temperature will be added as a cause of non-support for this reach

193. North Ponil Creek from the confluence with South Ponil Creek to the mouth of M^{c}Crystal Creek (Canadian River, 2306, WBS CR2-10400)

Previously listed for temperature, fecal coliform and stream bottom deposits. There are two sampling stations on this reach. All data are from a 1989 survey. Temperature data are not supporting for station CRB306.011045 (4/5) and Full Support, Impacts Observed for station CRB306.011060 (1/5). Fecal coliform data are 0/1 and 1/1. Total phosphorus was 0/6 at the lower station and 1/6 at the upper station.

1998 ACTION: This reach will be listed on the 1998 305(b) report as Full Support, Impacts Observed for fecal coliform, temperature, and total phosphorus at the upper station. The reach is listed as Not Supported on the 1998 303(d) list with temperature and stream bottom deposits as the cause.

2000 ACTION:

Temperature: Thermographs on this reach were deployed from July 17 through September 23, 1998. HQCWF temperature criteria were exceeded at the two thermograph sites. The upper site exceedence ratio was 44/1,631. This site exceeded the draft Temperature Protocol for hours of exceedence duration > 6 hours**.** The lower site had an exceedence ratio of 339/1,632 with a one-time maximum temperature exceedence of 28°C.

A TMDL was developed for the North Ponil Creek to address temperature.

Turbidity: Two sampling stations on this reach have a 1998-1999 exceedence ratio of 7/10 and 6/10 respectively.

A TMDL was developed for North Ponil Creek to address turbidity.

Stream Bottom Deposits: There are two stations on this reach which were used to characterize North Ponil Creek. The upper reach of North

Ponil Creek at FR 1950 is a Rosgen E5 stream type with a % fines <2mm of 79.9% indicating a high level of impairment.

The lower reach of North Ponil Creek above Ponil Creek is a Rosgen E4 stream type with a % fines <2mm of 29% indicating a moderate level of impairment.

A TMDL was developed for North Ponil Creek to address stream bottom deposits.

Total Phosphorus: Two sampling station was established on this reach. Monitoring at the stations documented 3/13 exceedences for total phosphorus.

A TMDL was developed for North Ponil Creek to address total phosphorus.

Fecal Coliform: Fecal coliform was removed from the 1998-2000 303(d) list but remained listed in the 1998 305(b) Report as full support, impacts observed (FSIO).

Add to the 305(b) Report as FSIO.

194. Cimarron River from the mouth on the Canadian River to Turkey Creek (Canadian River, 2305, WBS CR2-10000)

Previously listed for turbidity, plant nutrients and stream bottom deposits. There are three sampling stations on this reach. All data is from a 1988 and 1989 surveys. There is no turbidity standard for a LWWF. There are supporting data to justify the plant nutrients listing but not the stream bottom deposits listing.

1998 ACTION: Stream bottom deposits will be removed as a cause of non-support for this reach. This reach will continue to be included on the 1998 303(d) list with plant nutrients as a cause.

2000 ACTION:

Plant Nutrients: Plant nutrients will remain listed as a cause of non-support.

Plant nutrients will be retained as a cause of non-support

195. Una de Gato Creek from the mouth on Chicorica Creek to Throttle Dam (Canadian River, 2305, WBS CR1-10320)

Previously listed for fecal coliform and stream bottom deposits. There are three sampling stations on this reach. All data are from a 1989 survey. Fecal coliform ratios are 1/1, 0/1, and 0/2. There are no

data to support the listing of stream bottom deposits on this LWWF.

1998 ACTION: Fecal coliform and stream bottom deposits will be removed as causes of non-support on the 303(d) list. The reach has therefore been dropped from the 1998 303(d) list. The reach will be listed as Full Support, Impacts Observed for fecal coliform at one station.

2000 ACTION: None

196. Chicorica Creek from the mouth on the Canadian River to Raton Creek (Canadian River, 2305, WBS CR1-10300)

Previously listed for, fecal coliform, plant nutrients, and stream bottom deposits. There is one sampling station on this reach. All data are from 1989 and 1993 surveys. There is supporting data for the fecal coliform listing (1/1) as Full Support, Impacts Observed and also for the plant nutrients listing. There are no data to support the listing of stream bottom deposits.

1998 ACTION: The reach continues to be listed on the 1998 303(d) list as Partially Supporting for plant nutrients. The reach will be included in the 1998 305(b) report as Full Support, Impacts Observed for fecal coliform.

2000 ACTION: None

197. Vermejo River from Rail Canyon to York Canyon (Canadian River, 2306, WBS CR1-10200)

Previously listed for stream bottom deposits. There are two sampling stations on this reach. All data are from a 1989 survey. There are supporting data for adding total phosphorus at station CRB306.014020 as Full Support, Impacts Observed.

1998 ACTION: The reach continues to be listed on the 1998 303(d) list as Partially Supporting for stream bottom deposits.

2000 ACTION:

Stream Bottom Deposits: A 1999 fall survey was conducted to determine the validity of this listing. An embeddedness of 39%, a percent fines of 25%, width/depth ratio was 31.6 and an entrenchment ratio of 3.5 rates the stream bottom as fully supporting for aquatic life.

Water quality standards, as assessed using the 1998 Assessment Protocol are currently being met for stream bottom deposits on this reach.

198. Vermejo River from the mouth on the Canadian River to Rail Canyon (Canadian River, 2305, WBS CR1-10100)

Previously listed for metals (Se). There are four sampling stations on this reach. All data are from a 1988, 1989 and 1993 surveys. Selenium data indicate full support (0/2).

1998 ACTION: This reach has been removed from the 1998 303(d) list.

2000 ACTION: None

199. Canadian River from Cimarron River to the New Mexico-Colorado border (Canadian River, 2305, WBS CR1-10000)

Previously listed for stream bottom deposits and fecal coliform. There are five sampling stations on this reach. All data are from 1988 and 1993 surveys. Fecal coliform data indicate full support at station CRB306.019020 (0/1), and Full Support, Impacts Observed at station CRB306.019010 (1/3). There are no data to support the listing of stream bottom deposits for this LWWF.

1998 ACTION: This reach will be listed as Full Support, Impacts Observed on the 1998 305(b) list with fecal coliform as the cause. The reach has been dropped from the 1998 303(d) list.

2000 ACTION: None

SAN JUAN RIVER BASIN

200. San Juan River from the Animas River to Cañon Largo (WQS 2401, WBS SJR1-10000)

Previously listed for metals (Hg), stream bottom deposits, salinity, and fecal coliform. Mercury data indicated full support of the fishery use as there were no exceedences of criteria (0/8) within the last 23 years. While there are no salinity (total dissolved solids) criteria for the reach, there were no exceedences of the total dissolved solids criteria for the Colorado River at Hoover Dam (723 mg/l). Fecal coliform data indicated that the contact recreation use was not supported at two stations (SJR 106 and SJR401.004020). Station SJR401.004010 indicated Full Support, Impacts Observed (1/2).

1998 ACTION: Mercury and salinity will be removed as a cause of non-support for this reach. The reach will continue to be listed as Not Supported with stream bottom deposits and fecal coliform (SJR106 and 4020).

2000 ACTION: None

201. San Juan River from Cañon Largo to Navajo Dam (WQS 2405, WBS SJR1-20000)

Previously listed for metals (Hg, Se), turbidity, and stream bottom deposits. Mercury (0/15) and selenium (0/6) data indicated full support of the fishery use as there were no exceedences of criteria within 14 years. Turbidity data indicated the fishery use was not supported at station SJR104 (3/12), while there was Full Support, Impacts Observed for stations SJR405.005015 (1/8), SJR405.005035 (1/8) and SJR405.005045 (1/8).

1998 ACTION: Mercury and selenium will be removed as sources of non-support for this reach. The reach continues to be listed as Not Supported for turbidity (1 sta.) and stream bottom deposits. The reach will be listed as Full Support, Impacts Observed for turbidity at two stations.

2000 ACTION: None

202. Animas River from the mouth on the San Juan River to Estes Arroyo (WQS 2403, WBS SJR4-10000)

Previously listed for metals (Hg, Se) and stream bottom deposits. Mercury (0/15) and selenium (0/8) data indicated full support of the fishery use as there were no exceedences of criteria.

1998 ACTION: Mercury and selenium will be removed as sources of non-support for this reach. The reach continues to be listed as Partially Supported for stream bottom deposits.

2000 ACTION: None

203. Animas River from Estes Arroyo to the New Mexico-Colorado border (WQS 2404, WBS SJR4-20000)

Previously listed for stream bottom deposits and plant nutrients. Total phosphorus data from two stations, SJR404.00345 and SJR404.003001 indicate full support of the fishery use (0/10). There is no additional data to substantiate the listing for plant nutrients.

1998 ACTION: Plant nutrients have been removed as a cause of non-support for this reach. The reach continues to be listed as Partially Supported for stream bottom deposits.

2000 ACTION: None

204. San Juan River from the New Mexico-Colorado border to the Chaco River (WQS 2401, WBS SJR5-10000)

This reach is entirely within the borders of the Navajo Reservation.

1998 ACTION: It has been dropped from the 1998 303 (d) list.

2000 ACTION: None

205. San Juan River from the Navajo Nation boundary at the Hogback approximately 10 miles east of Shiprock to the Animas River (WQS 2401, WBS SJR5-20000)

Previously listed for metals (Hg, Se), salinity and stream bottom deposits. Mercury (0/9) and selenium (0/13, within 22 years) data indicated full support of the fishery use as there were no exceedences of criteria. While there are no salinity (total dissolved solids) criteria for the reach, there were no exceedences of the total dissolved solids criteria for the Colorado River at Hoover Dam (723 mg/l).

1998 ACTION: Mercury, selenium, and salinity will be removed as causes of non-support for this reach. The reach continues to be listed as Partially Supported for stream bottom deposits.

2000 ACTION: None

206. La Plata River from the mouth on the San Juan River to the New Mexico-Colorado border (WQS 2402, WBS SJR5-20100)

Previously listed for metals (Hg, Se), salinity, plant nutrients and stream bottom deposits. Mercury

(0/1) and selenium (0/6) data indicated full support of the fishery use as there were no exceedences of criteria. There have been some old data reports, from 1981 and earlier, of mercury above detection levels. This data is highly questionable. There are no applicable salinity or total dissolved solids criteria for this reach. There are no data to support the listing of stream bottom deposits. This is a flow limited river reach.

1998 ACTION: Mercury, selenium, and salinity will be removed as causes of non-support for this reach. The reach continues to be listed as Partially Supported for plant nutrients.

2000 ACTION: None

207. Chaco River from the mouth on San Juan River to Chinle Wash (WQS 2401, WBS SJR6-10000)

This reach is located entirely within the Navajo reservation boundaries.

1998 ACTION: It has been removed from the state 303(d) list.

2000 ACTION: None

LOWER COLORADO RIVER (UNCLASSIFIED)

208. Zuni River, perennial portions above Black Rock Reservoir (Lower Colorado River, unclassified, WBS LCR4-10000)

This reach is located entirely within the Zuni reservation boundaries.

1998 ACTION: It has been removed from the state 303(d) list.

2000 ACTION: None

209. Rio Nutria from mouth on Zuni River to headwaters (Lower Colorado River, unclassified, WBS LCR4-20000)

Listed for mercury chronic (Hg). There are no supporting data for this listing.

1998 ACTION: This reach will remain on the list as Partially Supporting its use until this metals listing can be verified.

2000 ACTION: None

DRY CIMARRON RIVER BASIN

210. Dry Cimarron River, perennial portions (WQS 2701, WBS DC1-1000)

Previously listed for temperature, pH, salinity (TDS), fecal coliform, total ammonia and stream bottom deposits. Temperature data indicated the fishery use was not supported at 3 of 4 stations (5/5, 4/4, and 5/5) while it was supported at only one station (0/5). Data for pH are similar and indicate full support (0/5) for the fishery use at one station (same station as temperature), while the use was not supported at the other stations (4/5, 2/5, 5/5). Total dissolved solids (salinity) data indicated that the fishery use was not supported at 2 stations (DCR701.000102, 5/5 and DCR701.000105, 5/5), while it was supported at 2 stations (0/5 and 0/5). Fecal coliform data indicated full support of the contact recreation use at two stations (DCR701.000105, 0/1 and DCR701.002010, 0/1) and Full Support, Impacts Observed at station DCR701.000102 (1/1). Total ammonia data indicated that the fishery use was partially supported at 3 stations (2/5,2/5, and 2/4), while it was full support at station DCR701.002010, 0/5. A biological assessment was conducted in 1990 by the NMED. The biological assessment found that the fishery use for station DCR701.002010 was not supported (40% of reference). Station DCR701.000110 was full support (90% of reference) and station DCR701.000102 was Full Support, Impacts Observed (75% of reference) for the fishery use.

1998 ACTION: Fecal coliform will be removed as a cause of non-support for this reach but will be listed on the 1998 305(b) list as Full Support, Impacts Observed. The reach will continue to be included on the 1998 303(d) list as not Supported for stations below DCR701.0002010 with temperature, TDS, pH, total ammonia and stream bottom deposits as the causes of non-support.

2000 ACTION: None

211. Long Canyon, perennial portions (WQS 2701, WBS DC1-10100)

Previously listed for temperature and total ammonia. Data are from one station (DCR701.000505) sampled in 1990. Temperature data indicated that the fishery use was not supported (2/4). Total ammonia data indicated that the use was supported (0/5).

1998 ACTION: Total ammonia will be removed as a cause of non-support for this reach. The reach will continue to be listed on the 1998 303(d) list with temperature as the cause of non-support.

2000 ACTION: None

212. Carrizozo Creek from the mouth on the Dry Cimarron River to the headwaters (WQS 2701, WBS DC1-30000)

Listed for chloride and removal of riparian habitat. Data are from one station (DCR701.000103) sampled in 1986. Chloride data indicate Full Support, Impacts Observed for the fishery use (1/3).

1998 ACTION: Chloride will be removed as a cause of non-support for this reach and will be listed on the 1998 305(b) report as Full Support, Impacts Observed for chloride. The reach will continue to be listed on the 1998 303(d) report with unknown as the cause of non-support.

2000 ACTION: None

213. Oak Creek from Dry Cimarron River to the headwaters (WQS 2701, WBS DC1-30200)

Listed for temperature, total ammonia, pH, and Removal of Riparian Habitat. There are two stations with data from 1990. Station DCR701.001501 indicated full support of the fishery use for all parameters (0/5). Station DCR701.001507 indicated Full Support, Impacts Observed for all three parameters (1/1). This station was also the reference site for a 1990 biological survey, which indicates full support for the fishery use.

1998 ACTION: The chemical and biological data supports upgrading this reach to full support. However the reach will continue to be listed as Partially Supporting with unknown as the cause on non-support.

2000 ACTION: None

SOUTHWEST CLOSED BASIN

214. Tularosa Creek from the town of Tularosa to the headwaters (WQS 2801, WBS CCB3-10000)

Listed as a LWWF (priority 7 reach) and for metals (Al, Hg). The Bureau received three letters from concerned groups in the area pertaining to this particular waterbody. Questions about the designated use prompted the Bureau to look into the applicability of the LWWF designation. A fish hatchery located on the river in Mescalero and operated by the U.S. Fish and Wildlife Service as well as other information contained in the letters led to a change in the designated use from a LWWF to a CWF. There is one sampling station (08481500) on this reach. All data are from 1989, 1990, 1991, 1992 and 1993 surveys. For aluminum (Al), 2/17 samples taken from 1989 to 1992 exceeded the criteria while 0/3 sample in the 1993 survey exceeded the criteria. For mercury (Hg), 1/10 samples taken from 1989 to 1991 exceeded the criteria. The designated use is fully supported for aluminum (Al) while it is fully supported, impacts observed for mercury (Hg).

1998 ACTION: This reach will be restored to the 303(d) list as a result of our decision to list all reaches where Riparian Habitat was moved as a Cause of non-support.

2000 ACTION: None

215. Gallinas Creek from the mouth on the Mimbres River to the headwaters (WQS 2803, WBS SWC2-10300)

Previously listed for temperature, fecal coliform, and total ammonia. There is only one sample station on this reach. All data are from a 1990 and 1995 surveys. For temperature, 1/2 of the samples taken in the 1990 survey exceeded the criteria, while 4/6 of the samples taken in the 1995 survey exceeded the criteria. For fecal coliform, 0/1 of the samples taken in the 1995 survey exceeded the criteria. For total ammonia, 0/6 of the samples taken in the 1995 survey exceeded the criteria.

1998 ACTION: Total ammonia will be removed as a cause of non-support for this reach. Fecal coliform will be dropped as a cause of non-support on the 303(d) list and will be added to the 305(b) list as Full Support, Impacts Observed. The reach will continue to be listed on the 1998 303(d) report as Partially Supported for temperature and stream bottom deposits.

2000 ACTION: None

216. Mimbres River, perennial portions below Sheppard Canyon (WQS 2803, WBS SWC2-10000)

Previously listed for metals (Al), temperature, fecal coliform and stream bottom deposits. There are three sampling stations on this reach. All data are from 1990 and 1995 surveys. For metals, at station SWC803.000105, 0/1, of the samples exceeded the criteria in the 1990 survey, while 1/2 of the samples taken in the 1995 survey exceeded the criteria. At station SWC803.002501, 0/7 of the samples taken in 1990 exceeded the criteria, while 0/3 of the samples taken in 1995 exceeded the chronic screening level indicating Full Support, Impacts Observed. At station SWC803.002530, 0/1 of the samples taken in 1990 exceeded the criteria, while 0/3 of the samples taken in 1995 exceeded criteria. For temperature, at station SWC803.000105, 1/1 of the samples exceeded the criteria in the 1990 survey, while 2/3 of the samples taken in 1995 exceeded criteria. At station SWC803.002501, 3/4 of the samples taken in 1990 exceeded the criteria, while 5/9 of the samples taken in 1995 exceeded criteria. At station SWC803.002530, 3/5 of the samples taken in 1990 exceeded the criteria, while 1/9 of the samples taken in 1995 exceeded criteria. For fecal coliform, at station SWC803.000105, 0/0 of the samples exceeded the criteria in the 1990 survey, while 0/1 (0%) of the samples taken in 1995 exceeded criteria. At station SWC803.002501, 1/1 of the samples taken in 1990 exceeded the criteria, while 0/2 of the samples taken in 1995 exceeded criteria. At station SWC803.002530, 2/2 of the samples taken in 1990 exceeded the criteria, while 0/2 of the samples taken in 1995 exceeded criteria. There are three 1995 biological stations on this reach. One below San Lorenzo was 75%, another at Mimbres was 68% and another above the Gallinas River confluence was FS 81%. It is believed that these data may be more influenced by low flow conditions than water quality.

1998 ACTION: Fecal coliform and aluminum will be removed as causes of non-support for this reach, but will be added to the 305(b) list as Full Support, Impacts Observed for these parameters. The reach will continue to be included in the 303(d) list as Not Supported for temperature and stream bottom deposits.

2000 ACTION: None

217. Three Rivers, perennial portions from U.S. Highway 54 to White Mountain Wilderness Boundary (WBS CC3-20000, WQS 2802)

Previously listed for temperature, conductivity, salinity and total phosphorus. Temperature data from 1987 at station CCB802.002025 shows a 4/5 exceedence ratio and a 5/5 exceedence ratio at station CCB802.002015. Conductivity data from 1987 at station CCB802.002025 shows a 5/5 exceedence ratio and a 4/4 exceedence ratio at station CCB802.002015.

1998 ACTION: Salinity (no standard) and total phosphorus will be removed as a cause of non-support for this reach. Temperature and conductivity will be listed as causes of non-support at stations CCB802.002025 and CCB802.002015.

2000 ACTION: None

218. Mimbres River from Sheppard Canyon to Cooney Campground (WQS 2804, WBS SWC2-20000)

Listed for metals (Al), dissolved oxygen and stream bottom deposits. There are three sampling stations on this reach. All data are from 1986, 1990 and 1995 surveys. For aluminum, at station 08477110, 0/2 of the samples exceeded the criteria in the 1986 survey. At station SWC804.003035, 0/1, of the samples exceeded the criteria in the 1990 survey, while 0/4 of the samples taken in the 1995 survey exceeded the criteria. At station SWC804.006048, 0/1 of the samples taken in 1990 exceeded the criteria, while 1/4 of the samples taken in 1995 exceeded criteria. For dissolved oxygen, at station 08477110, 0/4 of the samples exceeded the criteria in the 1986 survey. At station SWC804.003035, 0/5, of the samples exceeded the criteria in the 1990 survey, while 0/9 of the samples taken in the 1995 survey exceeded the criteria. At station SWC804.006048, 0/3 of the samples taken in 1990 exceeded the criteria, while 2/5 of the samples taken in 1995 exceeded criteria. For temperature (not previously listed), at station 08477110, 1/5 of the samples exceeded the criteria in the 1986 survey. At station SWC804.003035, 4/5, of the samples exceeded the criteria in the 1990 survey, while 4/9 of the samples taken in the 1995 survey exceeded the criteria. At station SWC804.006048, 0/3 of the samples taken in 1990 exceeded the criteria, while 0/9 of the samples taken in 1995 exceeded criteria. There is one 1995 biological assessment on this reach. The station at Cooney Campground was 56% of the reference site.

1998 ACTION: Aluminum will be removed as a cause of non-support for this reach and will be placed on the 305(b) list as Full Support, Impacts Observed. Dissolved oxygen will be kept as a cause of non-support for station 6048. Temperature will be added as a cause of non-support at station 3035. Stream bottom deposits will be retained as a cause of non-support.

2000 ACTION: None

219. Hot Springs Creek from the mouth on the Mimbres River to the headwaters (WQS 2803)

Listed for reduction of riparian vegetation and streambank destabilization. There is no applicable data to support any listing on this reach. This is also an intermittent stream that flows only during rain events.

1998 ACTION: This reach will be retained on the 303(d) list with a cause of unknown.

2000 ACTION: None

220. Cold Springs Creek from the mouth on Hot Springs Creek to the headwaters (WQS 2803, WBS SWC2-10210)

Listed for undetermined metals. Water samples were collected upstream of Cold Springs Creek and downstream of a sediment retention basin in November 1992 and February 1993 and analyzed for metals. Concentrations of dissolved copper and zinc exceeded acute criteria which indicates that the acute criteria would be exceeded in the receiving stream.

1998 ACTION: This reach is included in the 1998 303(d) list as not supported for copper and zinc.

2000 ACTION: None

221. Hanover Creek from the headwaters to Highway 152 Bridge (WQS 2803)

After consultation with staff from the NMED Silver City Office, Nonpoint Source Pollution Section of the SWQB, comments from the New Mexico Mining Association and Phelps Dodge Mining Company, it has been determined that this reach of Hanover Creek (Hanover Creek from the headwaters to Highway 152 Bridge) is ephemeral and should be removed from the 1998-2000 303(d) List as an impaired waterbody.

1998 ACTION: It has been dropped from the 1998 303(d) list.

2000 ACTION: None

WATERS WITH FISH CONSUMPTION GUIDELINES

1998 ACTION: List the following waterbodies on the 303(d) list for fish consumption:

Abiquiu Reservoir

Avalon Lake

Bear Canyon Reservoir

Carlsbad Municipal Lake

Charette Lakes

Eagle Nest Lake

El Vado Reservoir

Heron Reservoir

Lake Maloya

McAllister Lake

Springer Lake

Stubblefield Reservoir

Clayton Lake

Caballo Reservoir

Cochiti Reservoir

San Juan River from Hammond Diversion to Mancos River

Navajo Reservoir

Sumner Reservoir

Brantley Reservoir

Conchas Reservoir

Lake Farmington

McGaffey Lake

Elephant Butte Reservoir

Ute Reservoir

Santa Rosa Reservoir

2000 ACTION: **Remove the following waterbodies from the list as they have no fish consumption restrictions and were listed in error in 1998:**

McAllister Lake

San Juan River from Hammond
Diversion to Mancos River

McGaffey Lake

PLAYA LAKES

1. Laguna Gatuna

1998 ACTION: **Not listed**

2000 ACTION:

Toxic Substances: Lake Water Quality Assessment Surveys, Playa Lakes 1992, NMED/SWQB, pages 1-20. Wildlife habitat designated use section 3100 L. Threatened by historic discharge from produced water facility. Narrative section on toxic substances in section 1105, paragraph F. "...from any substances at concentrations that are toxic to or will adversely affect plants and animals that use these environments for feeding, drinking, habitat or propagation..." Boron and Ra226 + Ra228 exist in concentration questionable in terms of toxicity though current truth to this unknown and probably premature to speculate about.

This playa will be listed on the 303(d) list for not meeting the designated use of wildlife habitat with the cause being the narrative standard of toxic substances.

2. Laguna Toston

1998 ACTION: **Not listed**

2000 ACTION:

Toxic Substances: Lake Water Quality Assessment Surveys, Playa Lakes 1992, NMED/SWQB, pages 1-20. Wildlife habitat designated use section 3100 L. Threatened by discharge from potash industry. Narrative section on toxic substances in section 1105, paragraph F. "...from any substances at concentrations that are toxic to or will adversely affect plants and animals that use these environments for feeding, drinking, habitat or propagation..."

This playa will be listed on the 303(d) list for not meeting the designated use of wildlife habitat with the cause being the narrative standard of toxic substances.

3. Lane Salt Lake

1998 ACTION: Not listed

2000 ACTION:

Toxic Substances: Lake Water Quality Assessment Surveys, Playa Lakes 1992, NMED/SWQB, pages 42-62. Wildlife habitat designated use section 3100 L. Threatened by historic discharge from produced water (oil extraction industry). Narrative section on toxic substances in section 1105, paragraph F. "...from any substances at concentrations that are toxic to or will adversely affect plants and animals that use these environments for feeding, drinking, habitat or propagation..."

This playa will be listed on the 303(d) list for not meeting the designated use of wildlife habitat with the cause being the narrative standard of toxic substances.

4. Laguna Uno

1998 ACTION: Not listed

2000 ACTION:

Toxic Substances: Lake Water Quality Assessment Surveys, Playa Lakes 1992, NMED/SWQB, pages 81-98. Wildlife habitat designated use section 3100 L. Threatened by historic discharge from potash refining discharge to playa basin. Narrative section on toxic substances in section 1105, paragraph F. "...from any substances at concentrations that are toxic to or will adversely affect plants and animals that use these environments for feeding, drinking, habitat or propagation..."

This playa will be listed on the 303(d) list for not meeting the designated use of wildlife habitat with the cause being the narrative standard of toxic substances.

5. North Lordsburg

1998 ACTION: Not listed

2000 ACTION:

Toxic Substances: Lake Water Quality Assessment Surveys, Playa Lakes 1993, NMED/SWQB, pages 13-24. Wildlife habitat and livestock watering designated use sections 3100 L and 3100 K. Threatened by exceedences for the livestock watering use of Ra226 and 228. Narrative section on toxic substances in section 1105, paragraph F. "...from any substances at concentrations that are toxic to or will adversely affect plants and animals that use these environments for feeding, drinking, habitat or propagation..."

This playa will be listed on the 303(d) list for not meeting the designated use of wildlife habitat and livestock watering with the cause being the narrative standard of toxic substances.

6. South Lordsburg

1998 ACTION: Not listed

2000 ACTION:

Lake Water Quality Assessment Surveys, Playa Lakes 1993, NMED/SWQB, pages 25-36. Wildlife habitat and livestock watering uses do exist. Numeric standards, general standards and antidegradation policy do not place this playa on the list.

This playa is currently meeting surface water quality standards and will not be listed on the 303(d) list.

7. Pine Lake

1998 ACTION: Not listed

2000 ACTION:

Lake Water Quality Assessment Surveys, Playa Lakes 1993, NMED/SWQB, pages 88-100. Wildlife habitat and livestock watering uses do exist. Numeric standards, general standards and antidegradation policy do not place this playa on the list.

This playa is currently meeting surface water quality standards and will not be listed on the 303(d) list.

8. Little El Caso Lake

1998 ACTION: Not listed

2000 ACTION:

Lake Water Quality Assessment Surveys, Playa Lakes 1993, NMED/SWQB, pages 101-115. Wildlife habitat and livestock watering uses do exist. Numeric standards, general standards and antidegradation policy do not place this playa on the list.

This playa is currently meeting surface water quality standards and will not be listed on the 303(d) list.

9. Laguna Seco

1998 ACTION: Not listed

2000 ACTION:

Lake Water Quality Assessment Surveys, Playa Lakes 1993, NMED/SWQB, pages 131-143. Wildlife habitat and livestock watering uses do exist. Numeric standards, general standards and antidegradation policy do not place this playa on the list.

This playa is currently meeting surface water quality standards and will not be listed on the 303(d) list.

10. Laguna Americana

1998 ACTION: Not listed

2000 ACTION:

Lake Water Quality Assessment Surveys, Playa Lakes 1993, NMED/SWQB, pages 158-169. Wildlife habitat and livestock watering uses do exist. Numeric standards, general standards and antidegradation policy do not place this playa on the list.

This playa is currently meeting surface water quality standards and will not be listed on the 303(d) list.

11. El Caso Lake

1998 ACTION: Not listed

2000 ACTION:

Lake Water Quality Assessment Surveys, Playa Lakes 1993, NMED/SWQB, pages 170-184. Wildlife habitat and livestock watering uses do exist. Numeric standards, general standards and antidegradation policy do not place this playa on the list.

This playa is currently meeting surface water quality standards and will not be listed on the 303(d) list.

12. Little Tule Lake

1998 ACTION: Not listed

2000 ACTION:

Lake Water Quality Assessment Surveys, Playa Lakes 1994, NMED/SWQB, pages 1-12. Wildlife habitat and livestock watering uses do exist. Numeric standards, general standards and antidegradation policy do not place this playa on the list.

This playa is currently meeting surface water quality standards and will not be listed on the 303(d) list.

13. Tule Lake

1998 ACTION: Not listed

2000 ACTION:

Toxic Substances: Lake Water Quality Assessment Surveys, Playa Lakes 1994, NMED/SWQB, pages 13-22. Wildlife habitat and livestock watering uses sections 3100 L and 3100 K. Though possibly of natural origin, concentrations of Boron did exceed standard for livestock watering. Narrative section on toxic substances in section 1105, paragraph F. "...from any substances at concentrations that are toxic to or will adversely affect plants and animals that use these environments for feeding, drinking, habitat or propagation..."

This playa will be listed on the 303(d) list for not meeting the designated use of wildlife habitat with the cause being the narrative standard of toxic substances.

14. Green Acres Lake

1998 ACTION: Not listed

2000 ACTION:

Toxic Substances: Lake Water Quality Assessment Surveys, Playa Lakes 1994, NMED/SWQB, pages 23-40. Wildlife habitat and Marginal coldwater fishery uses apply sections 3100 L and 3100 F. No data exist to support concern of secondary contact. Low oxygen value from study was exceedance (by low concentration) of standard under MCF use. This playa is subject to great amounts of urban runoff with associated pollutants and oxygen demanding materials. Narrative section on toxic substances in section 1105, paragraph F. "...from any substances at concentrations that are toxic to or will adversely affect plants and animals that use these environments for feeding, drinking, habitat or propagation..."

This playa will be listed on the 303(d) list for not meeting the designated use of wildlife habitat and marginal coldwater fishery with the cause being the narrative standard of toxic substances.

15. Dennis Chaves Park Lake

1998 ACTION: Not listed

2000 ACTION:

Toxic Substances: Lake Water Quality Assessment Surveys, Playa Lakes 1994, NMED/SWQB, pages 41-53. Wildlife habitat and limited warm water fishery uses sections 3100 L and 3100 E. There is no data suggesting problems with secondary contact. Low oxygen value from study was exceeded (by low concentration) resulting in use impairment. Narrative section on toxic substances in section 1105, paragraph F. "...from any substances at concentrations that are toxic to or will adversely affect plants and animals that use these environments for feeding, drinking, habitat or propagation..."

This playa will be listed on the 303(d) list for not meeting the designated use of wildlife habitat and limited warmwater fishery with the cause being the narrative standard of toxic substances.

16. Laguna Del Perro

1998 ACTION: Not listed

2000 ACTION:

Lake Water Quality Assessment Surveys, Playa Lakes 1994, NMED/SWQB, pages 54-64. Wildlife habitat and livestock watering uses do exist. Numeric standards, general standards and antidegradation policy do not place this playa on the list.

This playa is currently meeting surface water quality standards and will not be listed on the 303(d) list.

17. Ingram Lake

1998 ACTION: Not listed

2000 ACTION:

Toxic Substances: Lake Water Quality Assessment Surveys, Playa Lakes 1994, NMED/SWQB, pages 93-109. Wildlife habitat, limited warm water fishery and livestock watering uses sections 3100 L, 3100 E and 3100 K. This playa lake has been affected for years with urban runoff, meat packing plant blood pits, solid waste dump encroachment, cheese processing plant waste and municipal waste water facility discharge. Dead animals and fish were observed. Narrative section on toxic substances in section 3100, paragraph F. "...from any substances at concentrations that are toxic to or will adversely affect plants and animals that use these environments for feeding, drinking, habitat or propagation..."

This playa will be listed on the 303(d) list for not meeting the designated use of wildlife habitat limited warmwater fishery and livestock watering with the cause being the narrative standard of toxic substances.

18. Wallace Lake

1998 ACTION: Not listed

2000 ACTION:

Lake Water Quality Assessment Surveys, Playa Lakes 1994, NMED/SWQB, pages 208-222. Wildlife habitat and livestock watering uses do exist. Numeric standards, general standards and antidegradation policy do not place this playa on the list.

This playa is currently meeting surface water quality standards and will not be listed on the 303(d) list.

19. Canon Air Force Base Playa

1998 ACTION: Not listed

2000 ACTION:

Canon AFB 1994 Phase I RCRA Facility Investigation and metals analyses of playa effluent water 5/24/2000. Wildlife habitat, livestock watering are uses. There are no significant human health risks by exposure to contamination in the lake water or sediments, and only a potential for risk (based on highly uncertain bioaccumulation assumptions) is predicted for ecological species at the lake. Numeric standards, general standards and antidegradation policy do not place this playa on the list.

This playa is currently meeting surface water quality standards and will not be listed on the 303(d) list.